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The Paris Exposition.

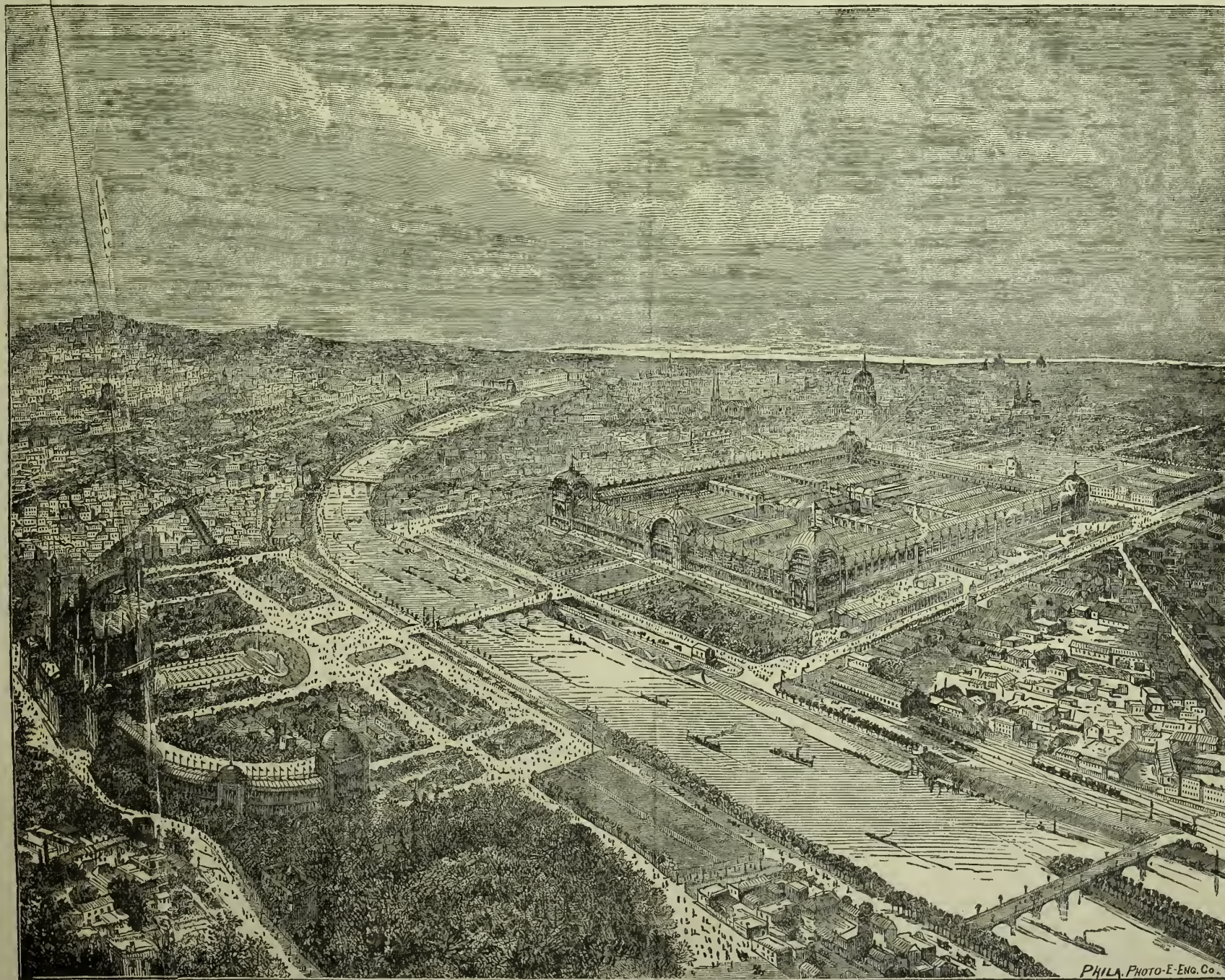
Our illustration on this page gives a bird's-eye view of the grounds and buildings of the great International exposition which is now in progress at the great city of the French. The reader will note at a glance the magnificent style in which the French people have provided for displaying their industrial strength and achievements. Indeed it calls forth wonder

hill of the Trocadero is to be a permanent palace and is in many respects a remarkable edifice. It is placed on the crest of the hill, and looks to the northward over the new suburb springing up on the west side of Paris, and in the southerly direction down on the river and the Champ de Mars. On the left side of the engraving is seen the building on the Trocadero. In the center, rising above a grand portal about 100 feet wide, is a pavilion, or grand dome, with a tower on each side reaching up about 250

palace there is a fine view of the park as well as of the exhibition building, and of the city itself. On the outside the Palace of the Trocadero is adorned by a cascade of water falling from a height of 26 or 30 feet into an ornamental lake, round which extend the elegantly laid-out grounds, in which figure many striking sculptures by well-known artists. Concerts and other entertainments will be held in the Trocadero.

The open space between the Seine and the

Below these interesting structures on the hillside runs the Seine river, separating the Trocadero from the Champ de Mars. This river, instead of being an interruption to the plan of exhibition, has been made one of its most picturesque attractions. The whole length of it between the Trocadero side and the Champ de Mars has been appropriated by Commissioner General Krautz, and used exclusively for the purposes of the exhibition. The Pont de Jena, which connects the two banks of the river, has



BIRD'S-EYE VIEW OF THE BUILDINGS AND GROUNDS OF THE PARIS EXPOSITION OF 1878.

from every student of human progress as he notes the recuperative power which secures such an industrial triumph for a people which has so lately risen from that of conquest and invasion. The deeds of French people are the world's pride and manna.

It will be seen that the exhibition grounds are well within the compass of the rapidly growing city. It will be seen, too, that the plan embraces both level elevated sites, with the river Seine running between them. The exposition buildings consist principally of two vast edifices, both newly erected; the one located on the heights of Trocadero and the other in Champ de Mars. Thiding on the

feet. Flanking the rotunda are galleries reaching out in horse-shoe shape toward the river, the frontage being 1,600 feet. The rotunda is an immense structure, containing the largest concert hall in the world, with a capacity of seating 6,000 or 8,000 persons. The towers form the highest points in Paris. They are furnished with lifts worked by hydraulic power for the elevation of visitors by the hundred or two at a time. From the top of the towers the view takes in the Valley of the Seine for miles on each side, and every prominent building in the city is easily distinguishable. The grounds around are beautifully laid out, and from the colonnade extending along the wings of the

Trocadero palace is about 500 yards in length, lying along a steep hillside, sloping toward the river. The hillside is steep—so steep, in fact, that a horse draws a cab containing two persons up the sloping streets adjoining with much labor. The tract has been converted into a charming and varied landscape, ornamented with a number of curious buildings, and containing delightful gardens, fountains and cascades. Among the curious buildings, some are of Japanese and Chinese construction, and some are model cottages of Sweden, Norway, Switzerland, Egypt and Turkey. One structure is the Algerian pavilion, of the purest Arabian architecture.

been widened and inclosed for a crossing place, and it looks as if it had been newly built for the occasion.

Crossing the bridge we come to the Champ de Mars, the main grounds of the exposition, shown in the large enclosure in the center of the engraving. The Champ de Mars building is an immense temporary structure, quadrangular in form. It is the main exposition building, and is more than 2,000 feet in length by 1,000 in width. The east and west fronts having long machine galleries measuring 2,310 by 120 feet. The principal front is located parallel to

Continued on page 9.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Merced County.—The Farmers' Canal Nearly Completed.

EDITORS PRESS:—Some items gathered lately about irrigation in a trip through Merced county may be acceptable to your readers. It is a pleasure to find that the Farmers' Canal, begun nearly five years ago for the purpose of furnishing water from the Merced river to irrigate the level lands along Bear creek, is rapidly approaching completion. Within about two months a large body of water will be conducted through the canal, its tunnel, and natural water courses between 20 and 30 miles from the headgate—three miles above Snelling and two and one-half miles below Merced falls—into Bear creek, and even through the latter into the San Joaquin a few miles above Dover.

The Truly Splendid Grain Crops

Along Bear creek now are so thoroughly matured, that they need no such aid this year, but it is truly fortunate that for next season distributing ditches can soon be prepared to spread this water, by flooding and seepage, over large tracts of land owned by the stockholders in this canal.

Until February last, no work had been done during four years on the canal proper for reasons unnecessary to mention, but especially because the original plan for a canal 100 feet wide and 35 miles long was found, by attempting it, to be so expensive that the money necessary could not be readily controlled.

Mr. W. G. Collier, Surveyor of Merced county, has the credit of originating this important irrigation scheme. Mr. A. D. Barling, an enterprising and skillful young engineer, more or less connected with the work from its beginning, has had charge of the construction of the tunnel for four years past, and is deserving of all praise for such modification of the original plan as could secure the completion of the enterprise in the shortest possible time at moderate expense, and for such judicious management, in connection with the Directors, as will secure the results above indicated before the end of August.

The Essential Points

In the modification of the plan are: 1. The construction of a canal only some 20 feet wide at bottom, extending six miles from headgate to tunnel. 2. A cut of 1,400 feet, with average depth of seven feet beyond and south of the tunnel. 3. The use of the natural water channels of a "dry creek," now known as Canal creek, and of Bear creek, to convey the water to irrigable tracts and its waste to the Joaquin. I find this latter principle of saving expense and following nature's lessons, by utilizing natural water channels as much as possible, is coming into popular use in the irrigated districts of Tulare and Fresno, on the east side of the valley. Its value as a sound principle may well be heeded by our State engineers and others in charge of our larger irrigation enterprises. Mr. E. A. Manning, Superintendent of the Mussel Slough ditch on Lower King's river, Tulare county, has applied this principle with marked success and great economy in his extensive system of irrigation, and claims to be the originator of this and some other important appliances for irrigation.

In the Merced canal, the most formidable part of the work has been

The Tunnel.

Its course is through a grayish, solid, indurated sand, which has to be drilled and blasted at every step of progress. The average amount displaced daily now is about two linear feet. Four men, a horse, two rough, wooden cars, and trainway suffice for this, under Mr. Barling's direction. On the six miles of the canal proper, between the river and the tunnel, 140 men are now at work, as many as 200 having been employed at times during the last four months. In that time four miles of the worst cuts have been completed, and two months more is deemed ample time to complete the remaining two miles—much the lightest part—and the cut below the tunnel, most of which is finished. I carefully examined the tunnel in company with Mr. Barling, and am indebted to him and Mr. C. G. Hubner, of Hill's Ferry, for the accompanying facts.

The tunnel proper is 1,650 feet long. Besides the cut of 1,400 feet at the south end—23 feet deep at face of tunnel—another at the north end is 600 feet long; depth at face of tunnel 35 feet, average depth 20 feet. So that the entire extent of the heavier part of the work—including adjacent cuts—is 3,650 feet, or nearly three-quarters of a mile. In the north end of the tunnel 740 feet are now finished; in the south end, where alone work is at present going on, 860 feet, leaving only 50 feet, on the 14th of June, to complete it. Standing at the wall in the north part of the tunnel, we distinctly heard the blows of the tamping in the south end. A round, perpendicular shaft, four and a half feet in diameter, is sunk 700 feet from the south face of the tunnel. Its depth is 45 feet to grade, the apex of the ridge pierced being 70 feet above grade. This shaft ventilates the tunnel well and admits immediately at its base as soft a light as a German student's lamp.

Near the noon of a hot June day, the cool air and soft light were so enticing that part of the notes here used were written there.

The Cost of the Tunnel

Alone will be about \$15,000. By the time the water reaches Bear creek, the entire expenditure will have been not far from \$80,000. The stockholders are now satisfied, that had the present plan been adopted five years ago, a large part of their expense would have been saved—probably more than half—and the work could have been finished much sooner. It is to be hoped that those controlling other plans for irrigation, will profit by the teachings of such experience.

A stone dam across the Merced, made some years ago for small irrigating ditches on bottom lands, turns the water into the canal, at the head of which is a head-gate of heavy timber 100 feet long and of such height as to protect the canal in times of high water. This is guarded also by a strong wing-dam of cobble stones and earth. The head-gate cost about \$5,000. These upper works and the cuts next to the tunnel were finished four years ago, but to give a fuller idea of the large amount of work done in the last four months, mention may be made of one cut—in stiff soil and hard rock about a mile below the head—which is 3,000 feet long, from six to 12 feet deep, and was made in six weeks by 170 men, at a cost of about 30 cents per cubic yard. Its course is straight, and it is a fine sample of engineering skill.

The Average Fall

In this six miles of canal is one foot to the mile; the fall in the tunnel is at the rate of five and one-quarter feet to the mile—or nearly two feet in its length. Inside slopes of cuts in hard material follow the ratio of one horizontal to one perpendicular; in soft material, one and one-half to one; inside slopes of embankments, two and one-half to one; height of embankments, four and one-half feet above the grade, or bottom of canal. Bottom of canal varies in width from 20 to 24 feet. Estimated capacity of tunnel, with water three feet deep, 176.6 cubic feet per second, though it can easily discharge 300 cubic feet per second. Provision is made to enlarge the canal in future, if desired. Capacity of tunnel can easily be enlarged by deepening it. It is a fact of interest that the fall in the first quarter of a mile of the creek, into which the tunnel discharges the water, is 15 feet, or at the rate of 60 feet to the mile.

There are about a dozen stockholders in the canal, prominent among whom are J. W. Mitchell, C. J. Cressey, C. H. Hubner, and Messrs. Atwater, Upton, Paige and Fowler, the latter being President of the company. Their enterprise is certainly one of great value and interest. Unquestionably, from the experience thus gained, similar canals, perhaps without tunnels, but using natural water ways, can be constructed at moderate expense comparatively, from the north bank of the Merced for the Tullock region, and the south side of the Tuolumne for the Ceres country, just as it is hoped will soon be done by a company already organized for the Modesto district, by taking water from the north side of the Tuolumne river.

Judging from the small impression made upon

The Large Volumes of Water

Now flowing in Kings river—near which this sketch is written—by no less than five large ditches on the south side and three or four on the north side, the Merced, Tuolumne, and Stanislaus may be relied on to supply ample water, when most needed, to thoroughly irrigate all the level lands between them. Then there is this encouraging feature: wherever land has once been thoroughly wet, it needs much less water to irrigate it. Mr. Barling, basing his estimate on what small ditches do on Merced bottom lands, calculates that his present canal can eventually supply 50,000 acres. This may be, especially when it has been somewhat enlarged, as is provided for. But considering the very large amount of water which extremely thirsty land will drink up, the canal will do well to irrigate thoroughly 10,000 acres in all, the first year it is applied.

After several years experience in irrigation, it is conceded here in Tulare county that 80 acres of land well irrigated and cropped is about as much as any one man can well manage. Consequently the important project here described and similar ones will best enable large landowners to subdivide and sell much of their land at fair prices, as many of them are more than willing to do so soon as they can.

Success in every way to the Farmers' canal, which will be the first to take the waters that have made Yosemite valley celebrated the world over for its beauty and sublimity, and will now make them useful to fertilize throughout the year many of the best farming lands of Merced county.

J. W. A. W.

Hanford, June 18th.

The House Sparrow.

EDITORS PRESS:—The English sparrow is a consumer that produces nothing but swarms of his only worthless brood, whose depredations in vineyards and orchards will ere long be recognized as perhaps the most severe affliction which the fruit grower has to endure.

These sub-tropical climates have proved most congenial to the nature and habits of the house sparrow; so much so that they breed every month in the year save one, viz., while moulting.

About 14 years ago the house sparrow was

introduced into Victoria, Australia, and such has been its increase that it has now spread over the country. In and around Melbourne, where it was first acclimated, and for many miles around, it has multiplied to incalculable numbers and has already done immense mischief to the growers of all kinds of fruit. In a garden in the city, the sparrows destroyed for me a grape crop of more than three cwt., leaving not one bunch. I have seen vineyards of two and even three acres left without a bunch of grapes year after year, so that the owners, in despair, dug up the vines.

Once let the sparrows become numerous, and farewell to any chance of suppressing the nuisance. Poisoning has been tried, but always failed where most needed, in the vicinity of fruit gardens. When there is not fruit, they will pick young buds. Shooting them among the fruit trees would do more harm than the birds themselves. In this country it may yet be possible to repress if not exterminate them, by assiduously killing them when possible and carefully destroying all nests.

It is said they destroy insects; truly, to the extent of rearing their young on them, but the parents will never touch insect food so long as they can help it. Their nature is against it. Their bills are formed for cracking seeds. The soft-billed birds, such as the English hedge sparrow, are the true destroyers of insects. Again, it is said the sparrow is a sort of homely creature, and so he is, like all parasites, as long as he can get anything by being so. But again we are told he must have some useful function in the vast scheme of nature; granted, so have bugs, so have fleas, mosquitoes, snakes, so has every variety of vermin, but as yet it is so hidden from us that we simply write them down vermin and destroy them as best we may.

Since writing the above, I met with the subjoined excerpt in the Auckland *Weekly News*, which bears out what I had written. There is no exaggeration about it. I quote: "I have no doubt that the sparrows, etc., do not inflict much mischief on Mr. Russell, in Fort street, but that they are a very serious loss to the country settlers there can be no doubt. I take my own case as a sample of many others. I used to gain from £30 to £50 a year by my linseed, now I never think of growing any. Peas, mangold and rape seed, and many other crops that brought me in a good return, are abandoned. Oats, of which I used to grow large quantities, I have also had to give up, even to the extent of providing for my own horses. I can no longer renovate my land by growing rape to be fed off by sheep—it takes twice the clover and grass seed to sow for a crop, and twice the wheat, which they dig up even when drilled in. Even from the wheat paddocks they rise up in a cloud, and the percentage loss of grain grows every year markedly greater. My strawberries and cherries are all destroyed and my other fruit injured, and even the very corn thrown down to my fowls is devoured by the sparrows, and still I am told that I am 'short sighted' and cannot see the good the birds are doing; but I can certainly see if they go on increasing as they do now, farming will have to be confined to the pastoral branch. Now, what the farmers require, or ought to require, is, in the first place, an immediate withdrawal of all protection from the house sparrow and other birds of the like habits."

J. I. BLEASDALE, D. D.
San Francisco, June 26th, 1878.

American Agricultural Exhibit at the Paris Exposition.

EDITORS PRESS:—The remarkable exhibit of the Commissioner of Agriculture in the Agricultural section of the United States is now finished. Its main feature is an ingenious pentagonal structure of wood and glass, in which economy of space and effectiveness of distribution of the objects exhibited have been very successfully combined. Unfortunately the agricultural building is too low, and the topmost pentagon almost touches the roof. The building, too, being small and low-studded the effect of the structure is entirely marred. The contents of the cases, however, are highly satisfactory. A more complete and better arranged collection of the natural products of our country could hardly have been made. Woods, fruits, fibrous plants and their pulps, minerals, corn, tobacco, flowers, in fact everything that the soil of the various States produces is to be found in the cases, fully and scientifically described, each by its separate label. There is a similar exhibit made by the Russian Agricultural department, but it is not nearly so complete or so compact and convenient as that of the United States.

The display of agricultural machinery, in another part of the building, is also very fine, and it is already evident that we will be able to distance all competitors and to sustain our reputation for cheapness, lightness, strength and ingenuity. The French, however, I have observed from their journals, are disposed to ridicule us, in their polite way, for our excessive ornamentation of plows, reapers, harrows and threshing machines. An article in a morning paper argued that it was evident, from the gilt luxuriousness of our machines, that our farmers went afield in kid gloves and soft raiment; not like their laborers in blue blouses and wooden shoes. The writer was not aware that the machines on exhibition here, are in their holiday attire, that they have come to Europe, and are

arrayed much more gorgeously than the specimens that do service at home on the prairies. There are some excellent exhibits of plows, grain drills, and other agricultural appliances. Deere & Co., of Moline, Illinois, the largest plow makers in the world and whose names are associated with the earliest steel plows made in the Western States, show their celebrated "Gilpin sulky plow," their "Highlander," "Prairie Queen," and also a "walking cultivator," which is decorated with a gold medal won at a State trial in Indiana.

A remarkable machine is "Faust's hay loader," exhibited by Stratton & Cullom, of Meadville. This machine is attached to the back of a wagon and will elevate a ton of hay in five minutes. Dederick & Co., of Albany, exhibit a perpetual baling press. Baugh & Son, of Philadelphia, show their mills and fertilizers. Wagons, carriages, and wheelwrights work, are fairly represented in the agricultural section. Studebaker Bros., of South Bend, Ind., and Peter Schuler, of Chicago, have each a good show of farm, freight and plantation wagons. Their wagons, however, are not of a character that it is worth while to advertise in this market, where vehicles for use in towns and cities must have very low front wheels, and be so constructed as to turn in the narrowest street. All heavy portage is effected by means of prodigious carts drawn by large Norman horses, sometimes as many as six harnessed tandem. In the way of carriages, huggies, etc., the largest exhibit is that of Brewster & Co., of New York, it is in the main American section, and contains, besides five specimens of buggies and spider totting carts, of the American pattern, several broughams, landaus and phaetons, built after the European styles. The American street car, models of lightness and smooth running, are exhibited by New York and Philadelphia firms. It may be remarked here that street cars are exported from the United States, a number were on the steamer by which your correspondent sailed, intended for the streets of Hamburg.

One of the features of the United States section is the curious way in which exhibits are mixed; for instance, Colt's pistols are in the machinery department, while Remington's firearms are in the industrial section. Almost the first object that strikes one in the gallery of alimentary products is the exhibit of a car-wheel company of Wilmington, Del.

It is upon agricultural machines and products, and upon certain class of manufactured articles, that our side of the water will have to rely for excellence. In sum of these we can certainly surpass all other exhibitors, but in every department of legitimate art and decoration we are far behind.

C. O. S.

POULTRY YARD.

Technical Terms.

There are very many persons who are familiar with poultry, their general appearance and common habits, and who are wholly unacquainted with the recently introduced terms as applied to fowls; words, the meaning of which thus used, is Greek even to those well informed on general subjects. For the benefit of those who may desire to obtain knowledge, a writer for the *Country Gentleman* gives a glossary of technical terms, derived from the best authorities:

Beard.—A bunch of feathers under the throat of some breeds of chickens, such as Houdans or Polish. There are many phrases, such as breed, brood, brooding, cage, etc., that even the least unlearned will understand. We often hear of a "litter of chickens," or similar expressions. Litter, applied to poultry, is inelegant and in bad taste. We hear of a litter of pigs, a litter of hens, etc., but a litter of chicks is entirely out of keeping.

Carnunculated.—Fleshed with small fleshy protuberances, as the head and neck of a turkey cock.

Chick.—A newly hatched fowl.

Chicken.—This applies indefinitely to any age under one year old.

Clutch.—This is applied both to the batch of eggs sat on by a fowl, and to the brood of chickens hatched therefrom.

Cockerel.—A young cock. A cockerel does not truly become a cock until 18 months of age, although he is generally thus termed at the age of one year. Until a year and a half old does he get his full moult, and attain to the full glory of plumage and size. Cockerels have many deficiencies that disappear when they emerge into fowls, full-plumed cocks. Then they may come exhibition birds with some trimming, yet be poor birds to breed from. It does always follow that a bird is suitable for long purposes simply because he or she has a prize. Many imperfections that presented themselves in the chicken may grow out, but offspring of such birds generally repeats the deficiency. Imperfect plumage may grow or be plucked, and other points be covered by a covering of flesh. Exhibition birds should always become so without aid. Nature often assisted by art in this respect as well.

Comb.—The protuberance growing on the top of the head.

Condition.—State of the fowl as regards health and beauty of plumage.

Crest.—A tuft of feathers on the head; of the significance as top-not.

Crop.—The receptacle in which the fowl's

food is stored before passing into the gizzard for digestion.

Cushion.—The mass of feathers over the rump of a hen, covering the tail—chiefly developed in Cochins.

Dubbing.—Cutting off the comb, wattles and ear-lobes, so as to leave the head smooth and clean.

Ear-lobes.—The folds of bare skin hanging just below the ears, by many called deaf ears. They vary in color, being red, white, blue and cream-colored.

Face.—The bare skin around the eye.

Flights.—The primary feathers of the wings used in flying, but tucked under the wings out of sight when at rest.

Fluff.—Soft, downy feathers about the thighs, chiefly developed in Asiatics.

Furnished.—When a cockerel has obtained his full tail, comb, hackles, etc., he is said to be furnished.

Gill.—This term is often applied to the wattles.

Hackles.—The peculiar, narrow, long feathers on the necks of fowls.

Henny, or Hen-Feathers.—Resembling a hen, from the absence of hackles and sickle feathers, and in plumage generally.

Hock.—The joint between the thigh and shank.

Keel.—A word sometimes used to denote the breast-bone.

Leg.—In a living fowl this is the scaly part, usually denominated the shank. In a dressed bird, the term refers to the joint above.

Leg Feathers.—Feathers growing on the outer sides of the shanks in many of the Asiatics.

Mossy.—Confused or indistinct markings in the plumage.

Pea-Comb.—A triple comb, resembling three small combs in one, the middle being the highest.

Penciling.—Small markings or stripes over a feather. These may run straight across, as in the Hamburgs, or in a crescent form, as in Partridge Cochins.

Poul.—A young turkey.

Primaries.—The flight feathers of the wings, hidden when the wing is closed, being tucked under the visible wing, which is composed of the "secondary" feathers. Usually the primaries contain the deepest color belonging to the fowl, except the tail, and great importance is attached to their color by breeders. A cockerel or a pullet of some breeds should never show a white quill or a white shaft to a quill to become perfect breeding birds.

Pullet.—A young hen. The term is not properly applicable after a bird is a year old.

Saddle.—The posterior part of the back, reaching to the tail in a cock, and answering to the cushion in a hen—cushion, however, being restricted to a very considerable development, as in Cochins, while saddle may be applied to any breed.

Secondaries.—The quill feathers of the wings which are visible when the wings are folded.

Self-color.—A uniform tint over the feather.

Shaft.—The stem or quill part of a feather.

Shank.—The lower and scaly joint of the leg.

Sickles.—The long curved feathers of a cock's tail, properly applied only to the top pair, but sometimes used for one or two pairs besides.

Spangling.—The marking produced by a large spot or splash on each feather, differing from the ground color.

Squirrel Tailed.—The tail projecting in front of a perpendicular line over the back.

Stag.—A term used for a young cock; chiefly employed by game fanciers.

Station.—An ideal standard for games, embodied in style and symmetry.

Strain.—A race of fowls that has been carefully bred by one breeder or his successors, for a number of years, and has acquired an individual character of its own.

Symmetry.—Perfection of proportion; often confounded with carriage, but quite distinct, as a bird may be nearly perfect in his proportions, and yet "carry" himself awkwardly.

Tail-Coverts.—The soft, glossy, curved feathers at the sides of the lower part of the tail, usually of the same color as the tail itself.

Tail-Feathers.—The straight, stiff feathers of the tail only; the top pair are sometimes slightly curved, but they are generally nearly if not quite straight, and are contained inside the sickles and tail coverts.

Thighs.—The joints above the shanks—the same as the drum-sticks in dressed fowls.

Top-Knot.—Same as crest.

Under-Color.—The color of the plumage, seen when the surface has been lifted. It is manifested chiefly in the down seen about the roots of the feathers.

Vulture-Hock.—Stiff, projecting feathers at the hock joint. The feathers must be both stiff and projecting to be thus truly called, and condemned.

Wattles.—The red depending structures at each side of the base of the beak, chiefly developed in the male sex.

Web.—The web of a feather is the flat or plume portion; the web of the feet, the flat skin between the toes; of the wings, the triangular skin seen when the wings are extended.

Wing-Bars.—Long lines of dark color across the middle of the wings, caused by the color or marking of the feathers known as the lower wing-coverts.

Wing-Bows.—The upper or shoulder part of the wings.

Wing-Points or Wing-Buts.—The ends of the primaries.

Wing-Coverts.—The broad feathers covering the roots of the secondary quills.

Wry-Tailed.—Crooked-tailed; a deformity.

THE VINEYARD.

Notes on European Raisin Making.

The different qualities of imported raisins known in the trade are the produce either of distinct varieties of the plant, of different soils, or of different modes of drying; this last, indeed, is all-important in producing a fine-flavored, fleshy, and good-looking fruit. In his account of Spain, Laborde thus describes the mode of drying these fruits:—"In the kingdom of Valencia they make a kind of ley with the ashes of rosemary and vine branches, to which they add a quart of slaked lime. This ley is heated, and a vessel full of holes containing the grapes is put into it. When the bunches are in the state desired they are generally carried to naked rocks, where they are spread on beds of the field Artemisia, and are turned every two or three days till they are dry. In the kingdom of Granada, particularly towards Malaga, they are simply dried in the sun without any preparation. The former have a more pleasing rind, but a less mellow substance; the skins of the latter are not so sugary, but their substance has a much greater relish, therefore the raisins of Malaga are preferred by foreigners, and are sold at a higher price. To this their quality may likewise contribute, as they are naturally larger and more delicate than those of the kingdom of Valencia."

The finest kinds at the present time are, we believe, those that are carefully dried in the sun as they still hang in bunches on the vines, the stalks being partially cut through so as to interrupt the natural flow of the juices, and the leaves being also removed around the bunches. The Spanish grape harvest for the preparation of raisins commences in August, and during the drying, more particularly of the better kinds of fruit, the bunches are very carefully overhauled and the small or injured fruits removed. Great care is needed that rain or moisture should not get to them, by which the fruits are often spoiled; and the stalks, instead of being the bright, reddish-brown color, so familiar to us, and always indicative of good fruit, become black or blotchy. When thoroughly dried they are carefully and tightly packed in boxes, varying in size.

In the neighborhood of Smyrna large quantities of grapes are grown entirely for the purpose of drying; the well-known Sultana, a small seedless variety with a light-colored fruit, is solely the produce of this neighborhood. The vines, which are planted in rows, usually about six feet to seven feet apart, commence bearing in the third year, and are considered in perfection at from four to six years old. The gathering of the fruit commences in July and lasts till about the middle of August, the principal bunches being gathered first, and those from the lateral shoots, which are for the most part smaller, being taken at the close of the harvest. The drying and packing are similar in principle to those already described. Sultanas always realize a higher price in the market than the other kinds of raisins, and the produce also fluctuates very much. It is estimated that, in the neighborhood of Smyrna, about 10,000 tons are annually produced. Very large quantities of raisins have been received from Malaga this season. From August, 1876, to June 30th of 1877, as many as 1,343,000 boxes arrived, against 977,520 up to the same date of the previous year. In the early part of the season, in some districts near Valencia, the vineyards suffered severely from storms, but the crops, on the whole, appear to have been good.

Somewhat similar to the Sultana in point of its being without seeds is the currant, the produce of a distinct variety of *vitis vinifera*, known as Corinthia, derived it is said, from Corinth, the place of its original cultivation. At the present time it is very largely grown in the Greek islands, especially in Patras, Zante, the best quality being produced in Patras, Vostizza, and Corinth. In a well ordered currant plantation the vines are usually found in rows about six feet apart, and sufficiently distant from each other to allow the branches to form a spreading head, which is supported by props. What we have said with regard to the gathering and drying of raisins is generally applicable to the currant. The currant crop of the Morea in 1876 was an exceptionally large one, reaching 70,000 tons, of which England took 53,556 tons, the United States of America 6,431, Canada 906, Trieste 2,999, North of Europe 441, Russia 659, Marseilles 32, while 4,926 tons were held for shipment to England and America. It seems from the report from which the above figures are gathered that the consumption of currants is steadily increasing all over the world.

Keeping Grapes.

The following method, among many that have been recommended for keeping grapes, has proved highly successful with those who have adopted it. Cut the fruit, when fully ripe, on a dry day; spread it out thinly on shelves or tables, in a cool, dry room, for a few days, two to six according to the weather, the object being to dry up the stems a little. Cut clean, dry, rye straw in a straw-cutter about an inch long, and cover liberally the bottom of a suitable tightly-jointed box or other vessel; on which place a layer of fruit, not too deeply; then cover with straw liberally, and lay fruit on it again; and so proceed with the packing of straw and fruit alternately. This done, they require

only a cool place, with as little moisture as practicable, to insure sound fruit for several months. A sprinkling of flower of sulphur increases the safety of the grapes; yet the absorbing property of dry straw is mainly and ordinarily sufficient.

The practice of keeping grapes in the fruit room with the stalks inserted in bottles filled with water, and suspended from the roof, is said to have become general in England. It is very important to direct attention to the fact that the stem must be inserted in the water immediately after it is severed from the vine, and also that the end of the shoot must be shortened. When the branches are not at once inserted the stalks will soon become brown and the berries shrivel. Also, if the end of the branch is shortened for the purpose of giving a neater appearance to the bunches when suspended in the fruit room, the grapes will soon begin to shrivel, and if not used within a short space of time, will be of little service. Last winter I saw in the garden of an amateur a very splendid lot of grapes which were very nearly spoiled through that portion of the wood above the bunch being removed.

UNFERMENTED WINE.—Those who have a superabundance of grapes make wine in the usual way and allow it to ferment. It thus becomes to a greater or lesser degree intoxicating. Much more so, of course, if spirits are added. Wine can be made without fermentation, and it will keep. It would be well if country settlers who grow more grapes than they can eat or dispose of, should know the method of manufacturing unfermented wine. The following extract will give some information on the subject: What is termed unfermented wine is simply the juice of the grape as it comes from the press and before it has undergone fermentation, and what people want to know is how to preserve the juice in its pure state without being liable to ferment. In the first place the grapes must be of good quality, such as the Muscat, and perfectly ripe. The juice preserved in the following manner, from the New York Tribune, is now used in many churches at communion. The writer says: "I use a common hand apple-mill and press, passing the grapes through the mill to break the berries, then pressing out the juice. Next put it into a copper kettle and bring it to a boil, and, when cool, pass it through a filter of six inches or more of clean sand and charcoal; it is then ready for bottling. Now take a flat-bottomed wash-boiler, and lay an old cloth in the bottom and stand it full of the bottles filled up to their necks, leaving a little room for expansion; pour water into the boiler to half the height of the bottles, and bring the water to a boil; then remove the bottles and cork tightly while hot, covering the tops with melted sealing wax; then put away in the cellar. I have had such bottles keep through two summers without a sign of fermentation."

THE DAIRY.

How Milk is Made.

There are different opinions on this point. The following is one view of the formation, as upheld by Dr. Sturtevant, in the *Scientific Farmer*: We all know that milk comes from the cow, and is derived primarily from the food that goes in at the mouth. The cow indeed is the machine which receives the raw material, the grass or hay or grain, and in the natural laboratory of her body produces the sweet and palatable milk, so essential to infancy, so agreeable to the adult. How it is done is a most interesting inquiry. It is not simply filtered from the blood, as water is filtered through earth or paper. It is itself an organized material, containing bodies which possess form and which are allied to the animal which produces them.

If we pass a bristle inward through the orifice of the teat, it traverses a duct or tube which opens into a reservoir which communicates with other reservoirs or with ducts; selecting one of these ducts and continuing, it finally arrives at a small sacular cavity, which comprises the extremity of the system. Within this cavity, the vesicle, as it has been named, the fat of milk is produced. But how? A microscopic examination shows these little cavities, but about a thirtieth of an inch more or less in diameter, are lined with cells of a uniform size; but, if anything, smaller above than below. These cells produce the milk-globules by forming new cells, in the following way: A cell commences to bud at the extremity and grows until the bud is dropped off into the cavity, and the water, containing casein and milk sugar in solution, and which has been transuded from the tissues, takes this young milk-globule, but just now a part of the living structure of cow, and washes it down through duct after duct, till it reaches the reservoir and passes out through the teat. Thus the fat of milk is formed in the cow, and the process is strictly an epithelial one, or a sort of a cell growth, as the nail cells elongate to form the nail of the hand or foot.

Let us retrace our way with the milk. The simple cell, which but just now was part of the vesicle, or terminal acini, or ultimate follicle, has received the material for its growth from the blood which has been brought to it by the system of capillaries, which has enveloped it with an abundant network. This material

received into the cell has become changed into fat, by a species of change allied to degeneration or the breaking up of previous compounds. This ultimate follicle is grouped with other vesicles of like character, to form a lobule.

This lobule is arranged with other lobules, and the combined secretion of all the lobules are passed onward to the main duct. To repeat, the vesicles secrete and pass their product, the milk-globule, into the duct of the lobule, and from this duct the globule passes into others, continually more capacious, until it reaches the reservoirs, which are principally arranged about the periphery and apex of the udder gland.

We thus see that the milk-globule is at one time a portion of the living cow, that it must partake in some measure of the character of the cow. Hence, as cows differ—we know that cows' meat differs, formed of muscle cells as it is, one piece of beef being tender and juicy, another being dry and tough—so must their be difference in their milk.

FLORICULTURE.

Notes on Rose Culture.—No. 3.

EDITORS PRESS.—Already the dry season is beginning to show its effects upon the flower garden where they are not properly treated. It is claimed by most California gardeners and tillers of the soil generally, that unless the system of irrigation be applied through the entire dry season, or until the crop is harvested, it is the worst policy to irrigate at all. The reason of this is very obvious. Watering develops surface roots in great abundance, which require a continued supply in order to keep them alive and growing. And hence it is, that if the supply is stopped, after once begun, these roots are exposed to the dry soil and thus starves and stunts the plant. Crops of nearly every kind can be grown successfully without irrigation where the ground is well cultivated.

With these points in view we will consider the best method of treating roses. For young plants, under two years of age, irrigation is preferable, but when it is not convenient, a free use of the hoe, if applied at least every two weeks, will suffice. After the plants have attained a good size and over three years of age irrigation is not so necessary when they are kept thoroughly cultivated, and fine plants can be grown without watering at all. Where a special show and continuance of bloom is desired, a tile inserted near the bush, so as to convey the water a foot or more below the surface, will be found a valuable means for effecting this purpose. Where the surface is kept well cultivated, watering through this tile a dozen times during the season is sufficient, provided it is done thoroughly each time.

Soil.

When choice can be had, a rich, heavy loam is preferable, though fine specimens can be grown on nearly all sorts, provided it is well enriched. Manure is an article, the application of which is injurious to but few plants, and none are benefited by it more than the rose. In planting the ground should be previously well enriched with strong cow or horse manure. (Some fertilizers and composts are good, but these two are preferable.) After they have become established, a good top dressing or mulching, with good stable manure, is necessary every fall or spring. Fall is the better time, thus allowing the ground to become saturated with the strength and washings of the manure during the rainy months. The manure should be spaded in before the dry weather begins and the ground kept in a state of continual cultivation. The effect of thorough manuring is amazing, and can scarcely be realized, unless it is tested, and results of the two systems, with and without manuring, witnessed. Some varieties growing on poor and rich soil would scarcely be recognized as the same kind. Some sorts that produce in well enriched ground large, double, fragrant blossoms have become, when planted in a poor spot, very insignificant, bearing flowers almost single in form and nearly odorless.

With these remarks I will close this article, leaving for the reader to adopt any observations which he may consider worthy of imitation. Rose culture is a large subject and to treat it scientifically and in detail would occupy the space of a large volume. While this is so it is equally true that any one by giving hints in his special line, learned from study and experience, will often save others much loss and many misdirected efforts. In the writer's humble opinion there is not a plant or shrub grown which will so amply reward the cultivator for his special study and attention as this justly entitled "queen of flowers." As far back in history as we can trace the cultivation of flowers, for ornamental purposes, the rose stands pre-eminent. Since then up to the present day it has continued to grow in popular favor, and it is now the leading favorite among amateurs and connoisseurs of floral and ornamental taste. It has ever engaged the hybridizers attention to an extent that no other plant has, as is evidenced by the innumerable varieties now under cultivation throughout nearly every civilized portion of the globe.

Z. EASON.

Santa Rosa, June 15th.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons of this department.

Worthy State Lecturer's Appointments.

The State Lecturer will visit the following Granges on the day and date herein given, prepared to hold a private meeting at each Grange for the good of the Order, and also a public meeting at such hour as each Grange may determine, to which public meeting everybody is invited. We bespeak for Bro. Pilkington a most hospitable reception and large turn outs, and those who can ought not to miss hearing him on Grange topics, for he discusses them with an earnestness and ability positively his own.

I. C. STEELE,
Master of the State Grange.
Secretary of the State Grange.

Name of Grange.	County.	Time.
Lincoln	Placer	Monday, July 8th, 1878
North Butte	Butte	Wednesday, July 10th
Grand Island	Colusa	Friday, July 12th
Willows	Colusa	Saturday, July 13th
Plaza	Colusa	Monday, July 15th
Farmington	Tehama	Wednesday, July 17th
Reading	Shasta	Thursday, July 18th
Millville	Shasta	Friday, July 19th
American Valley	Plumas	Tuesday, July 23d
Indian Valley	Plumas	Thursday, July 25th
Plumas	Lassen	Saturday, July 27th
Surprise Valley	Modoc	Tuesday, July 30th
Engleville	Modoc	Thursday, August 1st
Cedarville	Modoc	Saturday, August 3d
North-east	Modoc	Monday, August 5th
Modoc	Modoc	Wednesday, August 7th
Davis Creek	Modoc	Saturday, August 10th
Crescent City	Del Norte	Wednesday, August 14th
Rivellutah	Humboldt	Saturday, August 17th
Sable Bluff	Humboldt	Monday, August 19th
Ferndale	Humboldt	Wednesday, August 22d
Mattole	Humboldt	Friday, August 23d
Cahto	Mendocino	Tuesday, August 27th
Potter Valley	Mendocino	Thursday, August 29th
Lakeport	Lake	Saturday, August 31st
Cloverdale	Sonoma	Monday, September 2d
Healdsburg	Sonoma	Tuesday, September 3d

Disorganization.

EDITORS PRESS.—At a meeting of Liberty Grange, P. of H., held June 1st, 1878, the following resolution was passed:

WHEREAS, In view of the fact that there are now, within a radius of six or eight miles, six Granges existing; and

WHEREAS, There are more organizations than the state of the Order will justify; therefore be it Resolved, That we proceed to disorganize, and that the effects of the Grange be sold, and the money, together with what we have already on hand, be donated to the Ladies' Benevolent Society of the city of Stockton for charitable distribution, and that demits be granted all members in good standing, without cost, in order that all who may desire may join neighboring Granges.

On motion the Secretary was instructed to prepare a statement of the above action for publication in the *Stockton Independent*, *Stockton Herald* and *RURAL PRESS*. The Grange then adjourned sine die.

J. SCHOMP,
E. W. S. WOODS, Secretary.
Master.

The *Stockton Independent* says: "In accordance with this resolution, the officers of the Grange sold all the effects of the organization on Friday last, and yesterday Mr. Schomp turned over the proceeds, \$200, to Mrs. J. B. Hall, Treasurer of the Ladies' Benevolent Society. The money came as a God-send to the society, there being pressing demands upon their charities from poor, needy families, and the treasury was quite empty."

COLUSA COUNTY POMONA GRANGE.—The members will please take notice that the regular meeting of this Grange, which was to have been held at Grimes' Landing, Grand island, July 6th, is postponed until the 12th of July, in order to meet the Worthy State Lecturer on his visit to Grand Island Grange, and it is hoped and expected that every member of the Pomona Grange will be present, at 10 o'clock sharp, to attend the private meeting of the Order. There will be a public meeting in the afternoon, and everybody is invited.—J. R. Totman in *Colusa Sun*.

PERSONAL.—The *Oakland Times* makes the following announcement which many readers will peruse with sincere regret: "Superintendent Carr lies dangerously sick at Paraiso springs, where he has been for some time. His health seems to have been broken down. A species of chronic rheumatism seems to be the chief ailment. His wife is with him. He may soon be removed to Oakland."

In Memoriam.

SOCIAL GRANGE, No. 271, June 29th, 1878.
WHEREAS, The relentless hand of death has been laid heavily upon us, and the Divine Master has seen fit to remove from our circle, our beloved Sister, and late worthy Flora, AODIO SHERIFF.

Resolved, By this Grange, that in the death of Sister Aggie Sheriff, we have lost a dear and worthy member, and the family a loving and dutiful daughter.

Resolved, That we tender our heartfelt sympathies to the bereaved family in this sad affliction.

Resolved, That our chartered draped in mourning for 30 days, that these resolutions be spread on the minutes of this Grange, and a copy sent to the bereaved mother, also one to the *PACIFIC RURAL PRESS*, *California Patron*, and *Sacramento Valley Agriculturist*, with a request for publication.—(Sister H. E. Putnam, Sister S. E. Sherwood, Brother Wm. Atkinson, Committee.

JOHN MCPRIKE, of the west side of the San Joaquin river, claims that he will this year, on his various farms in this State, raise 140,000 bushels of grain. He has already marketed 30,000.

The New Warehouse Law.

An act in relation to Warehouse and Wharfing Receipts, and other matters pertaining thereto. Approved April 1st, 1878.

The people of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. That no warehouseman, wharfing, or other person, doing a storage business, shall issue any receipt or voucher for any goods, wares, merchandise, grain, or other produce or commodity, to any person or persons purporting to be the owner or owners thereof, unless such goods, wares, merchandise or grain, or other commodity, shall have been bona fide received into store by such warehouseman, wharfing or other person, and shall be in store and under his control at the time of issuing such receipt.

SEC. 2. That no warehouseman, wharfing, or other person engaged in the storage business, shall issue any receipt or other voucher upon any goods, wares, merchandise, grain, or other produce or commodity, to any person or persons as security for any money loaned or other indebtedness, unless such goods, wares, merchandise, grain, or other produce or commodity, shall be, at the time of issuing such receipt, the property of such warehouseman, wharfing, or other person, shall be in store and under control at the time of issuing such receipt or voucher as aforesaid.

SEC. 3. That no warehouseman, wharfing, or other person as aforesaid, shall issue any second receipt for any goods, wares, merchandise, grain, or other produce or commodity, while any former receipt for any such goods or chatties as aforesaid, or any part thereof, shall be outstanding or uncanceled.

SEC. 4. That no warehouseman, wharfing, or other person as aforesaid, shall sell or incumber, ship, transfer, or in any manner remove beyond his immediate control, any goods, wares, merchandise, grain, or other produce or commodity for which a receipt shall have been given as aforesaid, without the written assent of the person or persons holding such receipt or receipts plainly indorsed thereon in ink.

SEC. 5. Warehouse receipts for property stored shall be of two classes: First, transferable and negotiable; and second, non-transferable or non-negotiable. Under the first of these classes, all property shall be transferable by the indorsement of the party to whose order such receipt may be issued, and such indorsement of the same shall be deemed a valid transfer of the property represented by such receipt, and may be in blank or to the order of another. All warehouse receipts for property stored shall distinctly state on their face for what they are issued, as also the brands and distinguishing marks; and in the case of grain, the number of sacks, and number of pounds, and kind of grain; also, the rate of storage per mouth or season charged for storing the same.

SEC. 6. No warehouseman, or other person or persons, giving or issuing negotiable receipts for goods, grain or other property on storage, shall deliver said property, or any part thereof, without indorsing upon the back of said receipt or receipts, in ink, the amount and date of the deliveries. Nor shall he or they be allowed to make any offset, claim or demand other than as expressed on the face of the receipt or receipts issued for the same, when called upon to deliver said goods, merchandise, grain or other property.

SEC. 7. No warehouseman, or person or persons, doing a general storage business, giving or issuing non-negotiable or non-transferable receipts for goods, grain, or other property on storage, shall deliver said property, or any part thereof, except on the written order of the person to whom the receipt or receipts were issued.

SEC. 8. All receipts issued by any warehouseman or other person under this act, other than negotiable, shall have printed across their face, in bold distinct letters in red ink, the words non-negotiable.

SEC. 9. No warehouseman, person or persons, doing a general storage business, shall be responsible for any loss or damage to property by fire while in his or their custody, provided reasonable care and vigilance be exercised to protect and preserve the same.

SEC. 10. Any warehouseman, wharfing, person or persons, who shall violate any of the foregoing provisions of this act, is guilty of felony, shall be subjected to indictment, and, upon conviction, shall be fined in a sum not exceeding five thousand dollars (\$5,000) or imprisonment in the State Prison of this State not exceeding five years or both. And all and every person aggrieved by the violation of any of the provisions of this act, may have and maintain an action against the person or persons violating any of the foregoing provisions of this act, to recover all damages, immediate or consequent, which he or they may have sustained by reason of any such violation as aforesaid, before any court of competent jurisdiction, whether such person shall have been convicted under the act or not.

James A. Johnson, President of the Senate; C. P. Berry, Speaker of the Assembly. Approved April 1st, 1878. William Irwin, Governor.

It is difficult for the cars to ascend the grade in the Tehachapi mountains, on account of the myriads of grasshoppers that at times fill the air and cover the rails, and sometimes, when coming down the grade, the brakes fail to accomplish their purpose.

AGRICULTURAL NOTES.

California.

BUTTE.

CROPS.—*Record*, June 29: A telegram from Biggs says summer-fallowed grain has suffered no injury worth speaking of from rust, but winter-plowed grain along the Feather and Sacramento bottoms is so damaged by it that farmers do not anticipate more than a quarter crop from lands thus treated. Reports from a number of counties are the same.

CONTRA COSTA.

HENDRICK'S IMPROVED WAGON DERRICK.—*Gazette*, June 15: We referred last week to the improvements of Mr. W. T. Hendrick on the wagon derrick and fork. The improvements on this derrick include a telescoping mast that can be instantly raised and secured at any desirable height above the wagon platform, or as readily lowered for traveling, to clear overhanging trees, telegraph wires or other obstructions, and to ride without swaying strain, the raising and lowering being effected by a chain, operated with a ratchet drum, or spool, on which it winds, with a crank lever. The mast guys are set up in the same manner, by a turn or two of their respective ratchet spools. The gafts are so hung with thimbles that they can turn completely around the mast, and the fork is tripped by an iron frame attached to the gaft block, or it may be independently tripped by the forker with hand line. When dropped on the stack the fork is self-locked and remains so when hauled back by the guide rope for reloading, and thus avoids the troublesome and vexatious tangling and fouling with straw incident to hauling back the loose fork by the hand trip line. The derrick is worked by the engineer, the fork hoist ropes running clear of the ground directly to the break shaft, friction drums, on the engine, where the engineer is seated so as to have a full view of stacks and separator, and where he has all the cocks, valves, and working parts of the engine under his hands without stirring from his seat. Mr. Hendrick has also important improvements on the separators, which we have not space to describe.

COLUSA.

MILDEW ON GRAPES.—*Sun*, June 29: We learn that the mildew is playing havoc with the grape crop in some parts of the valley. E. McDaniel, of Union Township, has a large vineyard so badly mildewed that he does not expect to get any grapes at all. It has attacked the leaves and the young stocks as well as the bunches of grapes.

RUST.—Rust has made its appearance in our section, but it is not thought that it will injure the early sown wheat to any appreciable extent, and we find many farmers who doubt if it will seriously affect the late sown, unless there should be a term of still, foggy nights, with hot morning sun upon the wet grain, before it gets through the soft stages. So far as we can learn the rust has appeared in the grain on well drained, gravelly slopes, as well as on lowlands without drainage, and seems to be entirely due to meteorological causes without reference to drainage character of the soil or situation; and the more general opinion based on practical observation and experience is, that wheat not yet well hardened and mature, exposed to hot sun while wet with fog or dew will almost invariably be more or less affected with rust, most likely from the scalding, blistering or steaming effect upon the covering tissues of the plant, causing an exudation and oxidation of its juices.

FIRE ON FIRE PLAINS.—On Tuesday, the 25th, about half-past two o'clock, a fire broke out on the ranch of Mr. P. R. Garnett, which is about two and a half miles from Willows. In less than half an hour there were 104 men on the place with wet sacks fighting the flames. As all worked with hearty good-will, the fire was soon put out, and the neighbors, as well as Mr. Garnett, were saved from sustaining a great loss. In attempting to move and save the separator, three horses belonging to Mr. George Silvey, had to be abandoned to the flames, which reached the stacks, and made it too hot for any one to rescue the poor brutes, which were hitched to it and struggling in their harness. The separator was entirely consumed, as well as all the belting and combustible material about the engine. Mr. Garnett estimates his loss at about \$500.

LOS ANGELES.

EDITORS PRESS.—This has been an unusual wet spring and very bad for making hay, and also for harvesting early sown grain. This makes times very busy now, still we find time to read your most valuable paper. It comes every Saturday evening and is a most welcome visitor. Some of our fruit is beginning to ripen. We have rather a light crop of apples; other fruit about an average.—N. S. MONTAGUE.

LOS NIETOS.—EDITORS PRESS:—Many of our Nietos grain growers (myself included) are coming out in debt on our crop. Wheat with me failing entirely, and yet the weather continues damp. So that we generally cannot run our harvesting machinery until after noon. Corn in Nietos is now looking fair. Many farmers planted two and three times. The first difficulty was rain—crusting the ground and rotting the seed. Worms destroyed the second planting. The third planting generally found the ground in splendid condition and the corn started off finely. We of Nietos are fast proving the fact of "ten acres is enough." The ten-acre farmers

here are going ahead of us who still persist in "sowing broad acres." This is my fourth year of farming on the "broad acre" plan in Nietos, and I have lost money every year. So why deny a fact when the proof is before me. Ten acres from this out is suited to farmers of my caliber, in Los Angeles county, anyhow. But didn't I die hard? I hated to give in. And all I have to say to my old friends of the "broad acres" is, go in boys; let others shoot; ten acres is enough for me.—G. K. MILLER.

THE PAVILION.—*Express*, June 29: Mr. Holt, Secretary of the Horticultural Pavilion Committee, informs us that we understated the Committee's intentions in the construction of their building in our item yesterday. The plan is to be drawn for a building to cost eventually \$12,000 or \$15,000; but, for a starter, a shell will be constructed, suitable for present uses, which can be improved in architectural appointments and added to as the Society's funds increase. The first operation will be extended to the amplitude of the subscriptions, whatever they may be.

WHEAT CROP.—We have heard some very encouraging news from the wheat crop west of this city. A gentleman interested in its outcome assures us that the rust has not been near so damaging as the reports would lead us to believe. All the wheat planted in heavy adobe soil will turn out a full crop. That planted in light sandy soil will not turn out so well. A two-thirds crop may be depended upon. It is remarked that the Sonora wheat has turned out plump and solid, while other varieties have suffered more or less. There is a heavy-bearded wheat planted in that region which has rusted in places, but which has done well on heavy land. Our informant says that the experience of the wheat growers this season is greatly in favor of heavy and adobe soils. But very little rust has resulted in these soils and the greatest damage to the grain is noticeable in light soil plantings.

MARIN.

EGGS.—*Journal*, June 26: There are not enough eggs brought into San Rafael for home consumption. One merchant here brought over 230 dozen last week from San Francisco, and no doubt the other dealers do the same thing. A few acres devoted to chickens, near this town, if well managed, would pay a higher dividend than any of our present industries.

MONTREY.

CROPS IN THE SALINAS VALLEY.—*Index*, June 27: From personal observation and interviews with farmers in different portions of the valley we are reluctantly led to believe that, instead of "a full average," there will not be half a crop of wheat in the Salinas valley this year, owing to the great damage from rust that has been developed during the past few days. In fact, it will indeed be a fortunate thing for the valley if the harvest result in half an average yield. From Chualar down the damage will not be nearly so great as in the upper portion of the valley, where many large fields, embracing thousands of acres, will in all probability not be cut at all, as the cost of harvesting it would be almost as much as if the crop were good. South from Soledad—in Long, Indian, Peach Tree, Priest, Cholame, and other valleys—the wheat has, so far as we have been able to learn, escaped the rust almost entirely, which is a fortunate thing, as it is a matter of bread with the people of those localities. Yet, while the crop prospect is decidedly gloomy in comparison with what it would have been this year, had rust not interfered, the condition of affairs in this valley and county is infinitely better than last year. We will have plenty of wheat for home consumption and considerable to spare; plenty of barley, plenty of oats and a superabundance of hay. We do not deem it good policy to endeavor to disguise the fact of the shortness of the crop here or anywhere else in the State, as it will have a tendency to keep down the price of wheat to the injury of farmers who have any to sell. Were it not for the ravages of rust, the Salinas valley would have produced an immense yield of wheat—greater than was ever before known. We hope for the best.

NAPA.

FRUIT.—*Reporter*, June 28: The fruit crop in Napa valley this season is backward from one to four weeks. A gentleman informed us that he has pear and apple tree on his place which last year produced ripe fruit by the first of July, but this season the fruit will not mature before the first of August.

SACRAMENTO.

FLOW THE NEW-MADE SEDIMENT LAND.—*Record-Union*, June 29: A great amount of laud was made last winter during the high water by the deposit of sediment from the rivers. Wherever the deposit is from six inches deep upwards, we call it made land, for the reason that the character of the land is changed by the deposit, and, in one sense, becomes new land. Sediment to the depth of two or three inches on black lands adds greatly to the value of such lands and does not injure them even for immediate use, but when the deposit is so deep that the plow will not bring up a portion of the old soil to mix with the sediment, the value of the land for immediate use is injured or destroyed entirely. This made land has to be ripened or matured by exposure to the air and sun for a year or two before it will produce, but then becomes very valuable. All such land made last winter should be plowed and stirred up this summer to hasten the ripening process. By the mode of deposit, the settling of fine sediment from the water, it becomes so com-

HIGHEST AND LOWEST BAROMETER.						
June 25	June 26	June 27	June 28	June 29	June 30	July 1
29.94	29.81	29.91	30.01	29.91	29.81	29.85
29.83	29.77	29.82	29.95	29.81	29.74	29.74
MINIMUM AND MAXIMUM THERMOMETER.						
71	68	61	72	70	78	64
54	57	53	52	55.5	55	56
MEAN DAILY HUMIDITY.						
63	68	69	59	71	60	72
PREVAILING WIND.						
SW	SW	W	SW	SW	SW	W
WIND—MILES TRAVELED.						
224	200	333	457	154	199	258
STATE OF WEATHER.						
Clear	Clear.	Clear.	Clear	Clear.	Clear.	Clear
RAINFALL IN TWENTY-FOUR HOURS.						
Total rain during the season, from July 1, 1877, 35.18 in.						



The Captain's Drum.—An Incident of the Revolution.

In Pilgrim land, one Sabbath-day,
The winter lay like sheep about
The ragged pastures mullen gray;
The April sun shone in and out,
The showers swept by in fitful flocks,
And eaves ticked fast like mantel clocks;

And now and then a wealthy cloud
Would wear a ribbon broad and bright,
And now and then a winged crowd
Of shivering azure flash in sight.
So rainbows held and bluebirds fly
And violets show their bits of sky.

To Enfield church throng all the town,
In quilted hood and bombazine,
In beaver hat with flaring crown,
And quaint vandyke and victorine;
And buttoned boys in roundabout
From calyx collars blossom out;

Bandanas wave their feeble fire,
And foot stoves tinkle up the aisle;
A gray haired elder leads the choir,
And girls in linsey-woolsey smile.
So back to life the beings glide
Whose very graves have ebbed and died.

One hundred years have waned, and yet
We call the roll, and not in vain,
For one whose flint-lock musket set
The echoes wild round Fort Duquesne,
And smelled the battle's powder smoke
Ere Revolution's thunders woke.

Lo, Thomas Abbe answers, "Here!"
Within the dull long-meter place.
That day, upon the parson's ear,
And tramping down his words of grace,
A horseman's gallop rudely beat
Along the splashed and empty street.

The rider drew his dripping rein,
And then a letter, wasp-nest gray,
That ran "The Concord minute-men
And red coats had a fight to-day!
To Captain Abbe this with speed."
Twelve little words to tell the deed.

The captain read, struck out for home
The old quickstep of battle born,
Slung on once more a battered drum
That bore a painted unicorn,
Then right about as whirled a toreh,
He stood before the sacred porch.

And then a murmuring of hees
Broke in upon the house of prayer;
And then a wind-song swept the trees,
And then a snarl from wolfish lair;
And then a charge of grenadiers,
And then a flight of drum beat cheers.

So drum and doctrine rudely blent,
The casements rattled strange accord;
No mortal knew what either meant.
"Twas double-drag and Holy Word,
Thus saith the drum, and thus the Lord
The captain raised so wild a rout
He drummed the congregation out.

The people gathered round amazed;
The soldier hared his head and spoke,
And every sentence burned and blazed,
As trenchant as a saber stroke:
"Tis time to pick the flint to-day,
To sling the knapsack, and away!"

"The green of Lexington is red
With British red coats, brother's blood!
In rightful cause the earliest dead
Are always best beloved of God.
Mark time! Now let the march begin!
All bound for Boston fall right in!"

Then rub-a-dub the drum jarred on,
The throbbing roll of battle beat;
"Fall in, my men!" and one by one
They rhymed the tune with heart and feet.
And so they made a Sabbath march
To glory 'neath the elm-tree arch.

The Continental line unwound
Along the churchyard's breathless sod,
And holier grew the hallowed ground
Where Virtue slept and Valor trod,
Two hundred strong that April day
They rallied out and marched away.

Brigaded there at Bunker Hill,
Their names are writ on Glory's page
The brave old captain's Sunday drill
Has drummed its way across the age.

—B. F. Taylor.

"What Shall we do With Our Girls?"

We have been busied these many years taking care of our boys. We have endowed great colleges for their education, built immense factories and work shops for their use, invented various professions for the development of their talents, and opened to them every conceivable avenue of art, learning, industry, and adventure. We have even maintained large standing armies, at enormous expense, and been eager for war, that they might achieve distinction and make their power felt. Being thus provided for, and distinctly recognized as important workers in the world, what wonder that our boys have, as a rule, grown into worthy, independent and forceful men. Since the whole machinery of human society has been fitted exactly to their needs, what wonder that many have become eminent both in peace and in war. Meantime, how have we cared for our girls? We have said to them, in effect: "The only really respectable thing for you to do is to get married and help the boys along. If you can't or won't marry, you can teach an infant school or go out to daily service." The girls accepted

this doctrine with wonderful patience for many years, but, being possessed of considerable latent power, began at last to rebel, and, though the old theory is still largely advanced, its actual practice has been greatly modified. It is true that many colleges are now open to girls as well as boys; that the learned professions are no longer considered fit solely for men, that even the skilled handicrafts are yielding slowly to the demand made by woman for remunerative work, and that society is no longer shaken to its very center when a respectable woman "frees her mind" in public.

This is a season of transition from the old to the new, and therein lies the danger. The young girl of to-day cries "Fudge!" to all her grandmother's cherished notions, without pausing to sift out what are intrinsically valuable from what are narrow and prejudiced. That a thing is old-fashioned is enough to condemn it. She does not stop to consider that all the immortal truths that have wrought the salvation of the human race and lifted it from barbarism to civilization, are, to use one of her own contemptuous expressions, "as old as the hills." We must recognize the truth that our girls are exposed to temptations peculiar to the times. Freedom of action and fullness of opportunity, increase risk and responsibility. Slang, handkerchief flirtations, loud voices, boisterous laughter and an unseemly freedom of manner, are, in part at least, an outgrowth of the concessions that are being so rapidly made to our sex. No doubt many of these follies existed before women's rights were ever discussed, but they were more seriously condemned and more carefully concealed. It is scarcely possible to be much with young girls without finding cause for anxiety in their thoughtfulness and unattractive license of manner. If those who are older venture to suggest that slang is coarsening, that signals with a handkerchief invite insult, and that loudness of manner is thought to indicate lack of refinement, they are met by an incredulous stare, or a scornful laugh. These young people are "wise in their own conceit." They know that many by-gone notions concerning womanly propriety have been proven false by later experience, and they hastily conclude that all the old standards are worthless. In short, there is a tendency to rush to the opposite extreme; to mistake license for liberty, and to ignore a proper self-respect, as well as needless and foolish restraints. All marked changes of public opinion are characterized by similar phenomena. Humanity, reaching ever towards a higher level, is apt to sway backward and forward between two extremes, before settling definitely upon the true mean, and finding there a solid foundation from which to renew the struggle.

How shall we teach our girls to be free from false pride, independent, self-supporting, and, at the same time, genuinely modest, reserved, and delicate? The fact that a higher education is possible to them, suggests one answer to this question. True culture is always refining. Satan finds just as much mischief for idle minds as for idle hands to do. Fill a girl's mind with valuable and practical knowledge, and idle fancies and empty frivolities will be quite crowded out. Earnest study will necessitate self-denial and industry, two strong factors in the discipline that results in character. It will also require the giving up of social dissipation, another important help to the end we have in view. The quick impulses, keen appetites, and ardent imagination of the average young girl, make the temptations of gay social life particularly dangerous to her. She is a wise mother who refuses all invitations for "evenings out" for her daughter, until her school education is completed, her taste formed, and her judgment matured. A higher education must, indeed, be preceded and supplemented by the constant aid and influence of a "wise mother," if, through its means, our girl is to be developed into a pure and perfect womanhood. Such a mother knows all the dangers and all the temptations to which her daughter is exposed. She can enter with full zest into all her enjoyments. She can also distinguish, with clear vision, the border line between innocent and harmful pleasures; in short, she can guide her with wonderful infallibility, in the way towards the goal we are striving to reach. She can further exemplify, in her own busy life, the complete harmony between the fullest measure of "rights" and the most exquisite finish of womanly refinement. We believe the two should thrive together. Real strength and greatness in a woman implies, of necessity, a full complement of the virtues peculiar to her sex.

In the 31st chapter of Proverbs, the rich glory of such a character is set forth. Language could not state more explicitly that such a woman is worthy of every right and every honor she has ever claimed. No one in these days has dared to ask more for woman than is here demanded for the virtuous wife and mother. We can bring our girls to such a standard by carefully teaching them that intellect and culture are effective and powerful only when crowned by modesty, tenderness, and refinement.—Mrs. Welch, in *College Quarterly*.

A GENTLEMAN married his servant. A short time after their union he gave an evening party. Conversation flagging, silence reigned, when one of the ladies said: "Awful pause!" The lady of the house immediately exclaimed: "Awful paws, indeed! So would you have awful paws if you had done the dirty work in your life that I have."

Take Care of Father on Washing-day

"How I do hate washing-day," said Miss Annie White; "and here comes pap to his dinner and there's really nothing worth coming to, the boiler still on the stove and all the white clothes not on the line yet."

"And what are you going to do about it?" asked the invalid mother from the lounge.

"I hardly know. If it didn't take Kate all day to make three beds and empty the slops, she might help me along with the dinner."

"She is coming now, but there is little time for preparation, so just put on what you can; there is some cold beef I think."

And Annie found the cold meat, a loaf of bread, some butter and added a few preserves, and while she was thus employed her sister Kate had quietly shifted the boiler a little so as to give the griddle room, made and baked a few cornmeal slappers and also managed to produce a nice cup of coffee.

"And all that trouble for a man," said Annie White; "we would be satisfied with anything at all on washing-day; and what has become of pap anyhow; a man never seems in a hurry even when a woman's work is piled mountain high."

"You know he always goes to the barn before dinner, but I hear him on the porch."

While enjoying the comfortable meal, Mr. White said, laughingly, "I always pity Dick Jones on washing-day; says he rather go anywhere than home—everything in confusion and nothing fit to eat, and I believe he does, mostly, dine at the oyster saloon on that day. I told him that my wife always made me just as comfortable that day as any other, but I must confess to some doubts to-day, knowing she was so indisposed, am happy to find that I can depend upon my daughters also; and now Annie give me a piece of pie, for I must hurry a little as we're pretty busy to-day at the store."

He saw at once how it was—not a bit of pie in the house. "Well, never mind child, I've really had a very good dinner, but mother has spoiled me I suppose by always having a pie or some dainty dessert on the dreaded washing-day."

With his good-bye kiss, still lingering on her pale lips, Mrs. White said, "now girls, I tell you this must not happen again; I am not often sick and hope to be well in a few days, and anyhow you must understand that Saturday's baking must always include something comfortable for washing-day."

"But, mother, what ever made you spoil pap so; just think of the trouble it makes."

"I do not call it spoiling your pap, and I never considered it any trouble to make him comfortable. If I could not make enough pies to last over Monday, I would have a nice loaf of cake put away, and that, with some good preserves and cream, would add greatly to a dinner. The cold roast beef we all enjoy, and washing-day never prevented me from having some good hot mashed potatoes and then the cold gravy well-warmed up, and a little dish of slaw or whatever I could add to make the dinner entirely comfortable for father. And, girls, we all enjoy it, now don't we?"

"Why, yes, of course we do," said Annie, "but lots of folks just make out to keep from starving on washing-day, sooner than take all that trouble or indeed any."

"Yes, I suppose so; more's the pity. Would you like your father to dine in an oyster-saloon or a restaurant on that day, and tell people generally that he never had anything fit to eat at home?"

"Of course that would never do," said Kate.

"Well, then," said Mrs. White, "you should always be willing to do your best for your father every day; he is getting on in years, too, and likes a little petting; indeed most men do, and you know father has always been very kind and thoughtful for us; more than that you will be wise if you ever get good husbands."

"Oh, yes, of course," said Annie; "come Kate let us hurry up with the dishes."—*Germanantown Telegraph*.

WHAT SMOKING DOES FOR BOYS.—A certain doctor, struck with the large number of boys under 15 years of age whom he observed smoking, was led to inquire into the effect the habit had upon the general health. He took for his purpose 38 boys, aged from nine to 15, and carefully examined them; in 27 of them he discovered injurious traces of the habit. In 22 there were various disorders of the circulation and digestion, palpitation of the heart, and more or less marked taste for strong drink. In 12 there were frequent bleeding of the nose, 10 had disturbed sleep, and 12 had slight ulceration of the mucus membrane of the mouth, which disappeared on ceasing from the use of tobacco for some days. The doctor treated them all for weakness, but with little effect until the smoking was discontinued, when health and strength were soon restored. Now, this is no "old wife's tale," as these facts are given under the authority of the *British Medical Journal*.

MUSICAL MONTHLY.—No. 13 of Ditson & Co.'s *Musical Monthly* is at hand, with its usual good selection of music, vocal and instrumental. Of the former we have "Cover them over with beautiful Flowers," by Stewart, a quartet for Decoration Day, a patriotic song for tenor voice, "Our Country's Flag," Molloy's splendid Scotch ballad, "Jamie," and the Cuckoo song from "La Marjolaine." For the piano, there is a four page "Revival March" by Sousa, and the six-page "Sounds from the Ringing Rocks." All for 25 cents.

The Tornado.

Our exchanges bring affecting stories about the tornado which recently traversed Wisconsin. Farms that were the abodes of plenty are left as desolate as if no stately farmhouse and building had ever reared their civilizing influences on vale and hillside. Everything that old men had worked 30 years to rear had been swept completely away in less than one minute, in some instances not leaving a shingle to tell the story.

A mother stood at the side of the carriage and told how two of her precious babes on their way home from school crawled under a fence to escape the dire vengeance of the mighty storm. How she saw them from a window and wildly flew to their relief, but was cast back by the mighty wave of wind, which caught up the house in its herculean grasp, crushing it in fragments, carrying another daughter, barely eight years old, to the top of a small tree four rods from where the house formerly stood, but, by some miracle, the whipping of a chamber carpet around her in the tree so effectually that it held her there till relief came, but, alas, to find her spine so injured that her future, should she live, will be that of a cripple, the two smaller children being miraculously preserved from harm.

A fair-haired Norseman told, in broken English, how their little home had been picked up, as a feather, by the fell destroyer—father, mother, and brother—crushed as with the hands of a giant; carried 100 feet in the air, and four times as many away, and dashed to the ground, where father and brother lay a mangled mass, and the aged and revered mother, with bones broken and nigh unto death.

Everywhere we heard the desolate story of loss of home and friends. The tornado has been terrible in its effects. Fully 20 people have been killed in this county, and nearly a hundred seriously injured, besides those at Mineral Point and Fort Atkinson. The loss of property is almost incalculable. In places its track is only five or six rods wide, while at others it reached out its mighty arms from a quarter to half a mile, demolishing everything in its track.

How a Man will Work for his own Interests.

We lately made a few remarks about the advantage it would be to all if numbers of the periodical laborers could be enlisted in permanent industry by being given a share in some productive enterprise which their labor could carry forward. All of us have seen contrasted cases of men's working for their own, and for others interests. Mr. Joseph Harris, the well-known agricultural writer, in a recent address, made the following allusions: American farmers, as a class, work harder than any other farmers in the world. We occasionally find a drone in the hive, but, on the whole, we are a nation of workers, and it makes a great difference whether a man is working for himself or for others. We all know what a difference it makes in the amount of work done, whether a man is working by the day or by the piece. Last autumn I had men digging potatoes by the day; I paid them \$1.25 per day. Digging, picking up and pitting cost me over six cents per bushel. I then told two of the men I would give them five cents a bushel to do the work. They took the job, and these two men dug and pitted 100 bushels every day, and then went home; they sometimes got through by four o'clock in the afternoon. I got the work done cheaper, and the men earned double the money. Now just think what this means. These men earned \$1.25 a day. If we assume that it cost them \$1 per day for family expenses, they made 25 cents a day. Now with a little more energy and skill they earned \$2.50 per day, and instead of making 25 cents over and above expenses, they made \$1.50, or six times as much. In other words, they really made as much money in one day as they were previously making in a week.

I mention this merely to illustrate my idea in regard to the great advantage it is to us as a nation to have such a large proportion of those engaged in agricultural pursuits directly interested in the results of their labors. They are the owners and occupiers and workers of the land. Self-interest calls out all their energy and skill. They make every stroke tell. A nation of such farmers ought to be a rich nation.

THE HABIT OF OBEYING.—Boys, the habit of obeying at once is one of the best habits in the world. It makes prompt, active, energetic business men. Why, it is "now, [at once, right off]," what leads all the work to the world, and gets the pay for it too. A boy that is prompt and ready will be just the boy that will get recommended for a place in a warehouse or an office, and when he gets the place he will keep it until he gets promoted, till finally he becomes a member of the firm, probably its manager. All this because he is on hand, ready and prompt; sees what is ready to be done, and is ready to do it.

"ANYTHING new or fresh this morning?" a reporter asked in a railroad office. "Yes," replied the lone occupant of the apartment. "What is it?" queried the reporter, whipping out his note-book. Said the railroad man, edging toward the door; "That paint you are leaning against."

Chaff.

"Is the Kahn of Tartary a milk-kahn, containing, as it were, the cream of tartar?"

SAMSON was an eminent tragedian in his day, and in his last act brought down the house.

To the American boy there is an awful, a majestic difference in weight between the butt-end of a fish-pole and a hoe-handle.

AFTER a man gits to be 38 years old he kant form any new habits much. The best he kan do is to steer his old ones.—*Josh Billings.*

THERE are beautiful warm soda springs in Colorado, and people who go bathing in them at once exclaim: "Oh! but this is soda-licious."

THE use of the editorial "we" prevails in the South. An exchange says: "If we escape the hog cholera there will be a large surplus of pork next winter."

PEACH brandy enters into the mucilage composition on postage-stamps; so when you see the next drunken man, don't lay it to whisky. He may have just mailed a letter.

THE just published report of an Irish benevolent society says: "Notwithstanding the large amount paid for medicine and medical attendance, very few deaths occurred during the year."

SURELY, you must be tired, Aunt. I can't think how it is you are able to work so long. "Lawks bless you, my dear! When I onst sets down to it, like, I'm just too lazy to leave off."

A BEAUTIFUL widow of Newport, R. I., having let her chalet for the season, was asked what induced her to desert such a charming retreat. "To much balcony and two little Romeo," was her reply.

"DID you ever dabble in stocks?" asked a lawyer of a witness who was known to have fled from his native land to this asylum of the free. "Well, yes, I got my foot in 'em once, in the old country," was the reply.

ARA wedding recently, when the clergyman asked the lady, "Wilt thou have this man to be thy wedded husband?" She, with a modesty which lent her beauty an additional grace, replied, "if you please."

"Is there anything that will make grain come up quick?" asked the gentleman farmer of the old husbandman. "Well, no, I don't know of nothin' that'll do it," was the genial old fellow's reply, "unless it's crows." Then the gentleman farmer wanted to know where he could get some.

A LITTLE boy, hearing some one remark nothing was quicker than thought, said: "I kuow something that is quicker than thought." "What is it, Johnny?" asked his pa. "Whistling," said Johnny. "When I was in school yesterday, I whistled before I thought; and got licked for it, too."

OPERA airs in church are out of place. "That's the organ," said the mother to her little child, who was at church for the first time. "The organ? But where is the monkey, mother?" asked the child. Then, when the latest air from the latest opera rolled through the building, the mother whispered as she looked at the organist, "I can see him dear, but you can't."

In a rural district of Forfarshire a young plowman once went courting on a Saturday night. In vain he racked his brain for some interesting topic; he could call up no subject at all suitable for the occasion—not one sentence could he utter, and for two long hours he sat on in silent despair. The girl herself was equally silent; she no doubt remembered the teachings of the old Scotch song, "Men maun be the first to speak," and she sat patiently regarding him with demure surprise. At last John suddenly exclaimed, "Jenny, there's a feather on yer apron!" "I widna ha'e wondered if there had been twa," replied Jenny, "for I've been sittin' aside a goose a'night."

"CALIFORNIA ALL HAIL!"—A recent visitor to this coast, a Rev. gentleman of the East now lecturing there on his trip, in his peroration gives the following tribute to our golden commonwealth: "California is indeed the 'better country' of the United States. When I think of its scenery, variegated and intersected by every element of sublimity; its splendid rivers glistening in the landscape; its skies, soft and clean as those which bend over the faded splendors of Italy; its enlightened and liberal press, the magnificent benefactions of its citizens, the more than princely hospitality of dear and esteemed friends—partners of blessed memories and glorious hopes—when I think of these things, from the depths of my heart I say 'California all hail!'"

THE Utica Republican talks thus about postal absurdities: There are some very queer things about our postoffice regulations. Take the postal card, for instance. If a man has a steady hand and writes close, he may put several hundred words on a card and send it for a cent. If he pastes the least strip of printed matter on it the postage is increased to six cents, though he may print on it the same matter, and by putting it in small type get several thousand words on the card, and it will go for one cent; and he may paste the card all over with printed matter, then put it in an open envelope, and it will go for one cent.

A SALOON-KREPER, having started business in a building where trunks had been made, asked a friend what he had better do with the old sign, "Trunk Factory." "Oh," said the friend, "just change the T to D, and it will suit you exactly."

Young Folks' Column.

The "Athenians."—No. 2.

A Story for Boys.

[Written for the RURAL PRESS by LORRAINE.]

After supper, one evening, Hal Dayton dodged out the door when his mother was not looking, and went out the gate. He looked up and down the street, but could not see any boys. It was nearly dark and the lamp-lighter was going his rounds. Hal watched him while he lit the two nearest lamps, and then followed him around the corner. He had no particular object in doing so, only he felt rather lonely and wanted company or amusement of some sort. His home was not a pleasant one, and boys who do not have pleasant homes are more likely than others to try to find amusement on the streets.

Fortunately he did not meet either Jim Westbrook or Tom Hall, two rough boys that lived in the neighborhood, and when he came to Will Stevens' house, Will was standing by the door and asked him in. Hal accepted the invitation willingly, as he always enjoyed a visit there. It was a cold evening but there was a bright fire in the grate, which made the room quite comfortable. Mrs. Stevens sat by the table sewing, and Mr. Stevens was reading the paper. They said "good evening" to Hal, quite pleasantly, and Will's brother and sister made room for him by the fire.

Will sat down by the fire also; he was one of the "Athenians," and he and Hal talked for awhile about the society.

"How nice this fire-place is," said Hal, "I wish we had one at our house."

"It's first-rate to pop corn by," said Susy, "let's have some pop-corn. Ask mother."

Mrs. Stevens gave her consent, but advised them to wait till the fire had burned down a little more, so there would be a bed of coals.

"We can play dominoes while we're waiting," suggested Harry.

"Do you play dominoes?" asked Will.

"No," said Hal, "I don't know how."

"We will show you," said Harry, "if you like to play; you'll soon learn."

Will brought out a stand from the corner, and the four got around it and played dominoes till there was a nice bed of coals in the grate. Then the dominoes were put away, and Will got the corn-popper and popped a dish full of corn. Father and mother had some first, and then the children helped themselves and had quite a merry time.

Half-past eight was bedtime for the younger members of the Stevens family, and Hal said "good night," and went home.

He was not always so fortunate in the manner in which he spent his evenings, for sometimes he was out on the street with rough boys till 9 or 10 o'clock. His mother always scolded when he came home, and threatened to punish him, but the punishment did not follow unless she happened to be specially out of temper; so he paid little attention to that or the scoldings, and went on in his own way.

Hal's first meeting with the "Athenians" was rather an eventful one, although there was little for him to do; but everything was new, and he was much interested in the performances of the others. It seemed odd to see a boy, only two or three years older than himself, sitting in the big arm-chair as "President," and conducting the meeting with the same forms used by grown-up men. Fred Whitney was seated by a table, with pen and ink, writing in a large book, and looked rather dignified and important also. Hal felt quite small and insignificant when he considered that he had never done anything of that sort himself, and resolved to be more manly in future, and try to use better language.

After the meeting had been formally opened and some business matters disposed of, the original "speech" was made by Johnny Elliot on "Our Country," and was as follows:

"Our country was settled by some Spaniards in San Diego, in the year 1759. The people that live in it now are mostly other people. The first people that lived in our country were miners, and they got a great deal of gold dust out of the ground. They bought all their clothes and revolvers and provisions with gold dust."

"Some ranchmen raise a great many hundred bushels of wheat, and they sell it and send it to Europe. Some of the ranchmen in Europe have been fighting, and did not get time to raise much wheat."

"Some ranchmen raise a great many grapes, and have orchards of oranges and figs, and many things that do not grow in all other countries. Some people raise a great many strawberries and blackberries, which they put in boxes and send them to San Francisco to market."

"Our country is a very good country to live in."

Johnny's speech was followed by a select reading of the "Boy's Meditations," from the *Youth's Companion*, by Will Stevens, and then other speeches and reading followed, and two of the boys read essays.

The speeches and essays were, of course, not as good as one would expect from young gentlemen in college, or even from those in Grammar schools, but as the productions of the boys composing this society they were quite creditable, and the practice of reading and speaking before each other was likely to be of lasting benefit to them.

DOMESTIC ECONOMY.

An Essay on Soups.

A lady writing for the New York Tribune, gives the following points on soups: A good soup, a steak or roast, with two vegetables, well cooked and daintily served, and a dessert of fruit—these make a dinner which prepared with taste would satisfy the most fastidious, and which is certainly to be compassed by families with small incomes. Give up your dessert of pie or custard and substitute a first course of soup; it is far cheaper, more nourishing, more healthful, and makes a dinner in every way more satisfactory. It used to be said that the English were a people ignorant of soups; they could never have been worse in this regard than Americans. A greasy, watery fluid with pieces of uninviting looking vegetables floating about in it, is the stuff with which under the name of soup nine out of every ten American households regale themselves. And very seldom is even this served. That most delicious and piquant beginning of a dinner, very easily and cheaply prepared in countless fashions, is popularly considered among thrifty housewives to be unnecessary, expensive, and troublesome. It is in truth none of these things. An excellent French soup can be made ready with very little trouble at odd minutes during the preparation of dinner, and will add enormously to the pleasure and the grace of the table. Here for instance is potato soup, a dish so very delicious that one is in danger of spoiling the rest of one's dinner by eating too much of it. Take six good-sized potatoes, peel and quarter them; add one-quarter of a pound of salt pork, two leeks or two onions if leeks cannot be had, and a few sprigs of parsley. Put all these together in a pot with water enough to liberally cover them. Let them boil until the pork is tender and thoroughly done; by that time the potatoes will have fallen to pieces. Rub through a colander, taking out the pork. Then add to the mixture, which ought to form about a quart of rather thick material, a pint of milk and a piece of butter the size of a walnut, and salt to taste. Let it boil up once to become thoroughly hot, pass it quickly through a sieve, and serve in a tureen previously rinsed out with hot water. This is a soup which would tempt a gourmand and delight a child, and it can be cooked in an hour, instead of taking half a day or more like the average "vegetable" abomination. It is of the thickness of cream and tastes creamy. There is no greater mistake held by the average housewife than the conviction that all soups should be thin. The most exquisite French soups are thick, with a creamy consistency. It is only the soups with bouillon for a basis that are thin. Bouillon is a clear and strong beef-tea from which grease is thoroughly eliminated. Into this shortly before it is served put some green peas and carrots, turnips and potato, cut into dainty dice and already boiled, and you have a delightful *potage la Printanier*. Boiled macaroni or vermicelli added to the bouillon makes macaroni or vermicelli soup. The alphabets cut in "Italian paste" and called by that name, previously cooked and then put in the bouillon, make a soup quaint and piquant to the eye and taste. The variations on bouillon are innumerable, but grease is fatal to all. It is not fat that makes good soup, but lean meat, and especially boiled bones. Don't ever throw away the bone of your joint of roast beef with the scraps of meat still clinging to it—nor the skeleton of your roast chicken. Break them up and add them to your soup pot, and be rewarded by greater richness and a more exquisite flavor.

WEST INDIAN BLACK BEAN SOUP.—Take one quart of black beans, and let them simmer in three quarts of cold water till they crack and begin to grow soft, then add one-half pound lean salt pork, onions, pepper and salt, and let it boil down to the thickness one likes thin soup. About fifteen minutes before taking from the fire, put in two bay leaves, pinch of thyme (not powdered thyme) and four whole cloves. Then strain through a colander; add juice of one-half a large lemon, and slice the other half; if small, juice of one and slice another; also, slice up a hard-boiled egg, and serve at once.

COARSE OR GRAHAM BREAD.—No. 1, or fine Graham flour, makes the best bread. The sponge is made at the same time, and in like manner to wheat bread, except the water used, which is ten degrees colder, as coarse flour rises quicker than fine. The same proportions of milk and water are used. It is generally sweetened a little with sugar. When sponge is added, make as stiff a batter as can be stirred conveniently. When light, mold into soft loaves. For this reason, it wants to be placed in the hottest portion of the oven.

WHITEWASH.—Good lime slaked with sour milk, and diluted with water till it is about the consistency of ordinary whitewash, is recommended by the *Landwirth* as an excellent coating for woodwork. Fences, rafters, partitions, etc., are effectually protected against the weather for at least 10 years by this application. The casein of the milk in combination with the lime forms a permanent film, which dries so quickly in warm weather that heavy rains falling directly after it has been laid on will scarcely affect the work.

GOOD HEALTH.

Dietetic Experiments.

A carefully noted experience is that recorded in *Nature*, by Dr. T. L. Nichols, an American physician resident in England, who related particulars of a "dietetic experiment" upon himself which he made with a view to solving a difficulty as to the quantity of food per diem which would best sustain health. He began on November 5th, his food being chiefly bread, fruit, milk and vegetables. During the experiment he had taken no flesh meat, wine, beer, spirits, tea, coffee or tobacco. The first week he lived on bread, milk, fruit, and vegetables, the total weight being 3 lbs. 9½ oz., costing 3s. 1d. (about 75 cts.), i. e., a daily average of 8 3-14 oz., costing 5 2-7d.; this was slightly below his standard of 6d. a day. He felt better and clearer and brighter than usual. The second week he studied quality rather than cheapness, his food being "Food of Health," milk and fruit. Total weight, 4 lbs. 4½ oz.; cost, 3s. 8d. (85 cts.); average per diem, 9 5-7 oz., costing 6 2-7d., and nothing could have been better, physiologically, than the effect of that food upon him. His digestion was simply perfect, and the action of the whole system as good as it could be. He then discontinued milk as unnecessary. For the third week the total amounted to 3 lbs. 2 oz., equal to 1s. 9d. (43 cts.), giving an average of 7 1-7 oz. of food, costing only 5d. per day. Milk was not so cheap for food as Gloster, Dutch, and American cheese, because they had to pay for the water it contained. Doctors recommended 2 or 3 lbs. of food daily to repair the waste of the system; but he asserted that the weight of brain atoms and nerve force could not be measured. The food eaten had to be disposed of at great cost of life and strength, and he believed the wisest plan was to eat the smallest quantity that would properly support the body. The fourth week, his food being similar, weighed 3 lbs. 6 oz., costing 1s. 2½d. (30 cts.), giving an average of 8 oz., equal to 2d. per day. He considered 8 oz. the minimum and 12 oz. the maximum quantity of food that should be taken per day. The total weight of his food during the four weeks was 14 lbs 6 oz., costing 9s. 3½d., (about \$2.30); average per week, 3 lbs. 9½ oz.; per day, 8 oz., costing per week, 2s. 5d., and per day 4 1-7d. He then added soups, puddings, eggs, etc., and the fifth week his food weighed 3 lbs. 12½ oz., costing 3s. 4d., being at the rate of 8 4-7 oz., at 5 5-7d. (or 12 cts.) per day. For the sixth week the figures were 63 oz., at 2s. 1d. or 9 oz. at 3 4-7d. per day. He had taken the diet without stimulants, and had experienced a constant increase of health and strength and power to work, and his weight had remained at about 12 st. 2 lbs. (170), except that at the end of the fourth week there had been a slight decrease, which had since been recovered.

Fruits in Diseases.

A writer in the *Herald of Health* makes a strong statement regarding the use of ripe fruits in diseases. We cannot say it is not true and yet we should apply the "fruit cure" with some precautions. He says: "There is scarcely a disease to which the human family is heir, but the sufferings therefrom would be greatly relieved by the use of the very fruits which are now so strictly forbidden. Further, many of these diseases would be conducted to a safe termination under the free use of fruits, because of the acids they contain. When our troops were fighting the Seminoles in Florida, many sick with diarrhea and dysentery cured those diseases by stealing from the hospitals into the fields and eating fruits, blackberries especially. Since our very pleasant and profitable excursion of last month, I have sent several children, suffering with cholera infantum and with dysentery, to the peach orchard, with most gratifying results—and where they could not be carried to the orchards to pick and eat the fruit fresh from the trees, I have had the little sufferers fed with sound fruit with equally good results. In typhoid fever, in the treatment of which such extraordinary care is enjoined as regards diet, fruits are not only highly grateful to the patient, but even work very favorable results. A physician who had been sick some weeks with typhoid fever, says his diarrhea was cured by peaches. He says: 'I first ate the first half of a large peach, and feeling no ill effects, I ate the other half, then one or two more, and the next day as many as I desired.' He adds: 'My bowels got better at once, and my recovery was rapid.' Since our last meeting, a typhoid fever patient, who had been about three weeks sick, and though imploring, was allowed no diet but beef tea or milk punch, came under my care for a few days. I immediately ordered the free use of peaches and grapes, and the diarrhea at once ceased, and at the end of five days, when I relinquished the care of her, she was convalescent. My impression is, the disease runs a shorter and more favorable course under the free use of fruits than under the usual method of treatment, and I think the use of stimulants rarely required when fruits are freely used. In the treatment of scarlet fever and diphtheria, our summer fruits and many of the vegetables are most useful, and to the best may be added some, or, in fact, any foreign fruits. There is scarcely a disease accompanied with fever, but grapes and bananas may be freely given to the patient."



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The Week.

Is there any one whose veins are so varicose that the Fourth of July feeling cannot enter, warm and set in motion sluggish limbs. Very few indeed we are sure. For this Fourth of July fever is all-pervading, and it manifests itself in as many ways as there are individuals pervaded. It strikes one man in the tongue and that member is electrified and the result is an oration, a poem, or perhaps a fervent prayer. It strikes another man in the back and his drooping head is lifted aloft, his chest thrown out, his arms dropped to his sides—and we have a grand marshal of the day—a peaceful citizen turned into a beetle-browed major-general until nightfall. Again the fever strikes another man in the stomach and liquid fireworks are hurled in from morn till night, until whisky and patriotism waltz together to the brain, and naught save a faint "hurrah" gives token of the emotional whirl within. Again the Fourth of July disease strikes a boy and he is galvanized, mesmerized, volatized. The disease flies from head to foot like the flight of chills and fever. It is in his arms and he pulls the court-house bell from its hangings before the sheriff has rubbed his eyes twice. It goes to the boy's heart and that organ fairly chokes him as he listens to the music of the band and dreams that far off in the dim and uncertain future he too may be drum-major with nodding plume and gilded staff. Next the fever reaches his stomach and boughten gingerbread, bolognas and pop-corn drop through the hatchway as though he were provisioning for a three-years' cruise. Still the fever goes on until it twines his legs around the greased pole or sends him in headlong pursuit of the oil-coated swine.

Such in brief is the malady of the Fourth. Few organized things are free from it. Even the iron cylinder of our press has caught the fever and here it is whirling out the papers a day earlier than usual to give the office boys a holiday.

Field Notes for Harvest Time.

Again the season of dry fields brings the appalling accounts of devastating harvest fires. Already these terrible conflagrations have occurred in several counties as described in our Agricultural Notes in this issue. No one who has not seen these field fires, fought them and suffered by them, can appreciate the terror they inspire, the grievous dangers which attend them and the depressing losses which they cause by their fiendish flights over fields heavy with grain and laden with hopes and prospects of the grain grower. A telling picture of their ravages was lately given in the PRESS by Mr. Carter, and no line of it was overdrawn. Of course the lesson to be drawn from the disasters in other fields is that of the greatest caution and most diligent protection in our own. Make fire a most abject slave for the coming weeks. Regard a man who smokes in the neighborhood of your fields and stacks as an object of suspicion. And there are other wholesome precautions to take. Mr. Carter, a few weeks ago, in writing an article for us, made the following remarks about prevention of fire from various causes, which should be constantly repeated. He said: "Fires sometimes occur from the careless emptying of the old pipe by the tramp along the highway. Had the owner of the grain adjoining the road plowed a strip between the dry alfalfa grass and his grain, the fire had died out almost at its birth. Had you and your neighbors, instead of making all your summer fallow in one body, and your sowing in one body, alternated it in strips across the track of the prevailing summer winds, the mark of the fire would have been a short one. But here at home on your own premises, had you as soon as you had placed your precious stacks in the midst of combustible material, knee high, taken your harrow or cultivator and harrowed for 70 or 80 feet from the stacks, gathered up the rubbish and harrowed again, at a cost of about one dollar for each setting, your stacks would have loomed up on the blackened waste white and bright, and, if not better, still more precious in your sight for the perilous ordeal your good sense and industry had enabled them to pass. If there is a farmer in this State who reads these lines and heeds them not, he is unworthy a helping hand if such misfortune overtake him. He owes it to those who have helped him in past extremities, to his hard-working wife and to his children, to see that nothing is left undone to insure the safety of his crop."

We do not hear as yet of boiler explosions in our grain fields, and we hope we may not hear of them. Certainly we shall hear of but few, if every man who owns or runs an engine is wise and careful. It should be remembered that it is one of the glories of civilization that it places a higher estimate upon the value of human life, and yet we are constantly called to remember that the agencies which civilization has introduced into every day life, are powers for harm which the days of ancient rudeness did not know. The old-time threshing floors were scenes of feasting and rejoicing; the quiet cattle trod their harmless round; the pounding flail broke few heads but those of wheat. We live in other days and deal with other agencies and powers; now and then there occurs a calamity which seems to indicate that men forget and play with danger like children. There is a wholesome lesson to draw, and that is care, vigilant, unceasing care for humanity's sake. The powerful, soulless force which we employ to do the work which a billion of oxen could not accomplish between harvest and seed-time, must be most carefully and strongly muzzled, or men must pay the penalty of neglect with their lives. The practice of agriculture to-day requires skill which the days of small things did not demand. We have entered the field of the machinist and have taken his most dangerous agencies to serve us. With the agency we should secure a machinist's knowledge of it. It cannot be denied that in some cases this knowledge is wanting, and thoughtless men brave dangers which the skilled machinist would fly from if he could not remove. Our steam threshing engines are drawn from place to place and set up with as little care, sometimes, as a man would set up a cider press; and yet, every machinist knows that these small motors need greater proportionate care in handling and adjustment than the sturdy giants of the shop and factory, as they are quick to heat, so are they quick to superheat, as they are constantly subject to movement and disarrangement, the consequences of these conditions must be the more carefully looked for and remedied.

It cannot be doubted that these facts are often lost sight of, and fatal explosions result. Men who own threshing outfits often lose sight of everything in their haste to gain the money which results from quick work. Many of them know but little about the handling of steam, and if they get a good engineer they hurry and force him beyond his own conscience and knowledge of dangers. Mr. Kamp, of San Jose, gave us some time ago an instance of this kind. He said: "I have known a fair engineer ordered by a man who knew absolutely nothing about steam engines to put on 100 pounds of steam, when he (the engineer) protested with all his ability that it was dangerous to carry over 80 pounds. The

same boiler, on being inspected by a first-class engineer, called forth from him surprise and wonder that we had not all been 'blown into eternity long ago.'" A good engineer is always extremely cautious with steam, knowing as he does the powerful and dangerous agent that it is. It is only the rash and careless man who trifles with dangerous things. No man should fire an engine before he is sure that everything about is ready for the heat and the pressure, and when the work is well begun there should be no relaxation of care and watchfulness. For humanity's sake do not let homes be robbed and friends bereaved so long as the utmost of care and watchfulness is not bestowed upon the dangers which beset the steam power upon the farm.

These things and other things which they will suggest to thoughtful and cautious men, should be well considered now that the time of disasters is upon us. Our remarks are only general and aimed to call attention to the subject. We should like to have our readers give us the teachings of their experience as to the best means and methods for coping with these harvest dangers and preventing them.

QUERIES AND REPLIES.

Cicadians on Fruit Trees.

EDITORS PRESS:—I inclose samples of a fly, known here as the "dry fly." They sting the limbs of both apple and plum trees, causing them to die. The microscope reveals thousands of eggs in the bark and wood. They sometimes sting the body of the trees as well as the branches. What are they? What can be done with them?—R. D. NENALLY, Elma Mills, Siskiyou county, Cal.

We recognize the fly as of the genus *Cicada*. It has a family resemblance to the *Cicada septendecim*, commonly called "seventeen-year locust," but which is not a "locust" at all. It is a large fly, nearly an inch in length, wide head and prominent eyes, and body wedge-shaped from front of head to extremity of abdomen. It has large transparent wings. It has a long, sharp proboscis, adapted to piercing. In order to secure an accurate classification of the insect, we sent a specimen to Henry Edwards, Esq., and received the following reply: "The insect you send belongs to the genus *Cicada*, but as far as I know, it is at present an undescribed species. It is very common about Virginia City, and has been found from Vancouver to San Bernardino. It has, of course, the habit of its congeners, and, like *C. septendecim*, lays its eggs in the buds and axils of various plants. The species you send me attacks the wild plum in the neighboring State of Nevada."

Here we have another case of the insects of wild life invading our orchards as soon as they discover that we are growing trees suited to their tastes. The species of *Cicada* are an old pest in the East. The seventeen-year species is a busy foe when its periods come in different localities, and other species, which do not wait so long, for a generation have been found grievous enemies to fruit trees. The name "dry fly," which seems to be given to the insect on this coast, is parallel to "harvest fly," by which it is known in New England.

The life history of this class of insects may be briefly described. The fly is short lived, as flies generally are. It endures but a few weeks in the summer time, living upon juices of plants, and its chief duty is to deposit its eggs and thus arrange for the propagation of its species. The eggs are deposited in the bark and wood of plants by means of a piercer, with which the females are furnished. The eggs of one species at least have been found to hatch in less than 50 days, and the young insect, when it bursts the shell, is, according to Harris, one-sixteenth of an inch in length, and of a yellowish-white color, except the eyes and claws of the fore legs, which are reddish, and it is covered with little hairs. In form it is somewhat grub-like, and is furnished with six legs, the first pair of which are very large, shaped almost like lobster's claws and armed with strong spines underneath. When thus young, the insects are lively and their movements nearly as quick as ants. They have under the breast a long beak for sucking juice from plants. After reaching the air from the egg, they haste to reach the ground and deliberately release themselves from the twigs and fall. When they reach the ground, they immediately bury themselves in the soil, burrowing by means of their broad and strong fore feet, which, like those of the mole, are admirably adapted to digging. In their descent into the earth, they seem to follow the roots of plants and are found afterward attached to tender and succulent roots, perforating them with their beaks and thus extracting the vegetable juices, upon which they live and grown until they reach full size and are ready to bore their way upward and come into the air again as full grown "dry flies," as our friends find them on their fruit trees.

This outline of the life of the insects sent us is given in general terms, as it is drawn from what is known of the lives of other species of its genus. Like them it makes its growth underground, but how long it dwells there we do not know. In one species, as we have said, it lives 17 years upon the roots of the trees, all the time drawing from their strength to build up itself. In this State it is sometimes very ruinous. A case is reported in Massachusetts, where a pear tree, which showed signs of gradual death, was dug up. The larvæ of the cicada

were found in countless numbers, clinging to the roots, with their suckers piercing the bark. From a root a yard long and about an inch in diameter, 23 were gathered. They were of various sizes from one-quarter of an inch to an inch in length.

From the foregoing it will appear that the harm done by this insect is two-fold and most dangerous when least seen. Our querist says that the trees are dying from the countless thousands of punctures made for depositing the eggs and for gaining juice for the fly. If they are present in such numbers as this, the trees are indeed in a sad state. Generally the trees outlive the attack of the mature insects, losing, however, twigs and small branches, which are weakened by the punctures and broke off by following winds. But if they thus escape, it is only to undergo the protracted drain of the long lived larvæ, which hatch from the eggs and proceed straightway to the roots. It is hard, if not impossible, to wage much of a warfare on the mature fly. The best prescription we could make would be whitewashing, or smearing with strong soap suds, the trunk and all limbs within reach, with a view of preventing the fly from depositing in the bark, and possibly destroying the eggs or the young when hatched. It will be an important point after the eggs are deposited to prevent the passage of the larvæ to the ground. They are so small and lively that trapping would be difficult and remedies on a large scale would be too expensive. If we had a few choice trees, the roots of which we wished to save, we would try coating the ground under them with a good layer of wood ashes, being sure that the ashes would be good for the trees if it did not destroy the insects. If ashes were not at hand we would try air-slaked lime.

The cicada, before it reaches its winged form, has natural enemies. Ants and birds eat the eggs and the insects just as they are emerging from the shell. As the full-grown larvæ seek the surface of the ground to make their exit into the air, they are eagerly rooted up and eaten by hogs. Blackbirds will snatch them when turned up by the plow.

ASPARAGUS IN BAVARIA.—We have asparagus fields in this State from which the owners have reaped good returns, as well as delicious vegetable substance. They may be interested in a report which we find in the London *Farmer* of the gradually extending cultivation of asparagus in Rhenish Bavaria. M. Villoroy states that it is now grown there on soils that are originally sandy and poor, at a very small outlay and at a very considerable profit. In illustration of this he quotes the case of a gardener, near Saarouis, who owns about two and a half acres of poor sandy soil which he cultivates with asparagus. At the present time this man is cutting 100 or 120 bundles a day, which are bought up in advance by agents who despatch it to the large towns, at the rate of 15 cents per bundle, one-half kilogramme, weighing (one and one-tenth pound) each. As a rule, the cutting begins on April 15th, and terminates on June 24th, but taking the season as 60 days only, and the number of bundles cut daily as 100, the gross returns at the rate quoted would be 3,750 francs. This would be equal to a gross value of \$720 from two and a half acres. How do California receipts compare with this? It is added that the onions grown in among the crop more than repay all the cost of cultivation.

A EUROPEAN SUBSTITUTE FOR CLOVER.—According to a report furnished to the London *Farmer*, by a Silesian authority, the common goats'-rue (*Galena officinalis*) is largely cultivated as fodder in the Vistula governments as a substitute for clover or for esparcet. Being a perennial plant it offers considerable advantages. In some respects it closely resembles the vetch, and will yield from 36,000 to 40,000 lbs. of hay per dessjatine, doing best on low-lying chalky soils. The first year's growth alone will yield about 400 lbs. of seed per dessjatine, and by the second or third year the crop may be cut five or six times in the season. The hay contains 5.5% of nitrogenous matter and 1.83% of fat, so that one pound of goats'-rue hay is in this respect equivalent to about 2½ lbs. of ordinary meadow hay. The crops also afford a fine honey-gathering ground for bees, and it is said that cows fed upon it will give from 30% to 50% more than their ordinary yield of milk.

METEOROLOGICAL SUMMARY FOR JUNE.—The report of the U. S. Signal Service officer, of San Francisco, for the month of June is summarized as follows: The mean height of barometer for the month was 29.91; mean temperature, 58.2; mean humidity, 73.02; prevailing winds, southwest; highest barometer, 30.148; lowest, 29.745; highest temperature, 73°; lowest, 52°; monthly range, 22; greatest velocity of wind, 34 miles per hour; total number of miles traveled by wind, 8,711; total rainfall, .01 inches. Rainfall in June during former years: 1872, .04 inches; 1873, .02 inches; 1874, .14 inches; 1875, 1.02 inches; 1876, .04 inches; 1877, .04 inches.

The order formerly issued, authorizing military pursuit into Mexico of cattle thieves, will be more rigorously enforced, irrespective of Mexican protests, on the ground that Mexico, by herself preventing the incursions, can obviate the invasion of her soil by our troops.

Six hundred visitors arrived at Santa Cruz on Saturday last.

Hop Growing on the Pacific Coast.

It is generally known that our hop growers have undergone this year a period of exceeding low financial barometer. The course of prices has been uniformly downward since the crop was baled. Whatever advantage in price would have naturally accrued to producers by the reduced production of the dry year has been wholly cut off by the abundance in other regions and the consequent low value at trade centers. The encouragement now to persevere and turn out a good article this year must be found in the fact heretofore observed, that there has always been a reaction from a year of low prices, either because of unfavorable seasons elsewhere, or because many have turned their backs upon the business. The prize heretofore has been to him who continued in the production through thick and thin. Thus we hope it may prove this year. We are furnished by Philip Wolf & Co., of this city, with a general review of the hop season which is now closing, from which we take the following points of general interest:

It is a well known fact to every person engaged in the hop trade that this line of business during the season just terminating, has been extremely unsatisfactory and disastrous to a great number of growers, in so far that when sales were not made during harvest, or immediately thereafter, prices depreciated so materially, that quite a number of growers were crippled, not being able to meet their ordinary business obligations.

For the same reason, many old and well-known hop houses in the East and in Europe, that purchased in anticipation of an improvement in price as the season advanced, had to succumb and fail in their business.

In addition to low prices during last season, while European and Eastern yields, on the average, were abundant and of fine, heavy quality, California hops were short as to quantity, and the entire crop of the coast was not up to quality in previous years, attributable, no doubt, in California, to the extremely dry weather of the winter of 1876-77.

The average quality of California hops was so inferior that we are under the necessity of recording the fact that they were neglected to a large extent in the New York and London markets, entailing a loss in nearly every instance to exporters.

The product of our neighboring State of Oregon was particularly inferior. The growers having had extremely unfavorable weather during picking time, sent to this market nothing but badly cured, tough, rusty hops, of coarse texture. On the other hand, we are but too glad to report that the hops of Washington Territory, grown on the sound, have shown a material improvement as to flavor, color and cleanliness, over previous pickings. The proper light pressed bales, furnishing such of 160 to 170 pounds, have also, in most instances been adopted, and if our friends in that section will continue to improve, their hops will soon enjoy a fine reputation. We again caution growers in the last named section, and Oregon, not to use wrapping paper of any sort inside bales, a proper baling cloth is sufficient to protect hops against emergencies.

Prices in the San Francisco market for the season under review, commenced for early varieties at about 15 cents, receding however, in September and October, before any lots of note were taken for export, to 10 and 12 cents, and subsequently ruling at seven to nine for California choice and seven to eight for Washington Territory. Inferior grades of all sorts sold as low down as three to five cents, and were a bad "buy" at that price, as inferior hops in a year of plenty are almost worthless.

As stated before, the crop of our entire coast fell short and did not reach 12,000 bales of 200 pounds each. Present stock, mostly in warehouses at San Francisco, about 1,500 bales, the largest portion of which, however, is of very inferior quality. While, as we stated at the outset, the past hop season has been a very unprofitable one to growers as well as to merchants, we would, at the same time, say to those hop growers who have been fortunate enough to weather it through, that there is still no cause to despair. Adverse seasons will occasionally come up, but a change for the better often steps in when we least expect it, and we give as our advice to farmers who have not lost all faith in hop-raising, to persevere and take the best of care of their yards, harvest and cure in the best possible manner, and send nothing but a choice article to market.

Our reports from the most important hop-growing districts in Europe and the Eastern States, are that the weather has not been very propitious for the growing plants, and as we, in this section, are solely governed by prices of the London and New York markets, a deficient or bad crop elsewhere would enhance prices for our product here materially, provided the quality of our crop will be up to the mark.

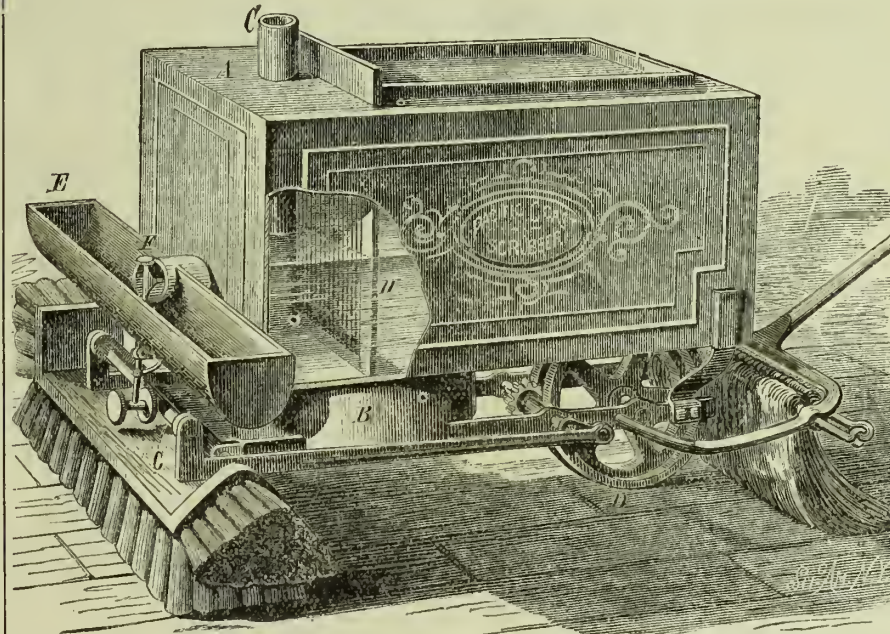
THE National Festival in honor of the Paris exposition was a great success. Hundreds of thousands of people poured into the city, and when the inauguration of the statue of the Republic began the mass of the spectators was immense.

The Paris Exposition.

(Continued from page 1.)

the Seine, 700 feet from the quay. The general plan of the building includes three pavilions, divided by two galleries extending between them and their whole length. At the four corners of the rectangle rise higher pavilions, surrounded by domes, which reach to a height of 132 feet, and are constructed in a semi-Oriental style that is decidedly pleasing. In front of it are beds of rhododendrons, grass plots, statues, fountains and conservatories. The terrace is 280 meters in length by 20 in width. At intervals are placed gigantic sculptures, symbolizing the principal participants in the exhibition.

France has reserved for herself a large part of the space provided for exhibits in the Champ de Mars building. She occupies one-half of the vast edifice—all the galleries on the left of the central portal, besides a large part of the middle gallery are set apart for fine arts. On the right side, the visitor on entering will come upon the English exhibit. Next to France, England occupies the largest space—one-eighth of the palace—allotted to any nation. Next to England in the main building comes the United States. The space allotted to the United States is about one-fifth of that occupied by



STOCKLEY'S IMPROVED SCRUBBING MACHINE.

Great Britain. Although our exhibitors were among the last in the field and have been hampered by the meager appropriations of Congress, our department is among those which were the first ready. The quality of the exhibit is reported as quite creditable, and in some particulars as beyond competition. Our contributions are arranged in eight groups, which may be briefly indicated as follows: Works of Art, Educational Apparatus, Furniture and Accessories, Textile Fabrics, Mining Industries and Products, Mechanical Industries and Apparatus, Food Products and Agricultural Implements.

The American Exhibit.

Whatever of excellence there may be found



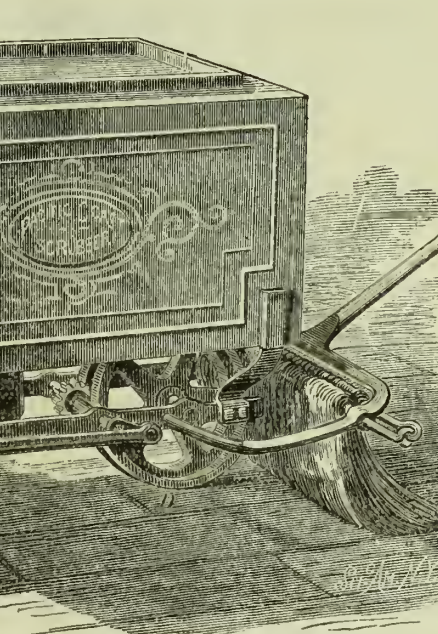
GEN. R. C. McCORMICK.

in the American exhibit is largely attributable to the labors of Commissioner General McCormick, of whom we give a small portrait on this page. Richard J. McCormick, who is well known as ex-Governor of Arizona, and as incumbent of other responsible positions, was appointed Commissioner General to Paris very late in the day, because of the slowness of Congress to provide for any representation at Paris. He went to work with a will and succeeded in drawing out a good list of exhibitors by his direct efforts. He was early on the ground at Paris with his exhibits and succeeded in early finishing of the American exhibit, as described above. He is aided at Paris by a corps of assistant and honorary commissioners, appointed by the Government.

An Improved Fruit Pitter.

We illustrate herewith an improved device for pitting fruit, recently patented through the MINING AND SCIENTIFIC PRESS Patent Agency by Mr. A. T. Hatch, of Cordelia, Solano county. The machine is designed to divide and remove the pit by a single motion and with but a small amount of waste of material, while the fruit will be prepared for drying and preserving in a rapid and simple manner at small expense.

The device, as will be seen by the engraving, consists in the construction of a pair of peculiarly-shaped and flanged knives, formed on hinged metallic handles, which are kept in a closed position by a spring placed between the handles. These metal handles have knives made at their other ends by shaping the metal properly. The handles are hinged together at the sides where a portion of the metal projects, as shown, forming ears at the central part lengthwise the machine. A spring between the handles keeps the knife blades in position for entering the fruit. The blades are formed with a curved portion to encircle the pit, and a



straight portion to divide the fruit as shown, and have also extension or guide lips which work in corresponding slots. By means of these lips and the shake given to the knives, the fruit will be cut in pieces and freed from the pit; the latter enters the hollow part above the knife blades and is shaken out through openings where the metal has been cut away as shown, the sides being bulged or expanded to allow a clearance.

The fruit to be preserved or pitted is placed on a table, stem downwards. The machine is taken by the hand and pressed into the upper end of the fruit; and by reason of the shape of the knife blades, they pass around the pit, cutting the fruit in pieces and removing but a small portion of the fruit with the pit. As the spring causes the blades to hug the pit in passing, the latter is shaken out of the machine through the sides as it is raised, and the pieces of fruit are brushed to one side by hand. The operation being accomplished in a simple and effective manner, may be done with speed by a skillful person. These devices are made in different sizes for peaches, plums, etc. Further information may be had by addressing the in-



HATCH'S IMPROVED FRUIT PITTER.

ventor as above, or the Grangers' Business Association, 106 Davis street, San Francisco.

SILK IN SPAIN.—The cocoon harvest begun in Spain about a month ago, and, according to all reports, falls considerably short of the expectations that had been formed of it, a good deal of disease having occurred at the latter end of the season. Prices are low.

POULTRY.—Wm. Niles, the well-known poultry dealer, advertises in the RURAL PRESS for a partner, having found it impossible to secure trustworthy help. This is a good opportunity for a live business man.—Los Angeles Republican

A RUMOR has been received that Emperor William has intimated a disposition to abdicate.

An Improved Scrubbing Machine.

The apparatus herewith illustrated is an invention for scrubbing and mopping floors, recently patented through the MINING AND SCIENTIFIC PRESS Patent Agency, by Dr. A. F. Stockley. This new household implement is self-acting, the operator having merely to propel it. It heats its own water, projects the same in spray form, works a scrubbing brush, and finally applies a mop or wiping cloth.

A is a water tank of any desired size, the top of which is closed by a suitable cover, and which is mounted on a truck. Underneath is a box, B, in which the lamp or stove for heating the water is placed, the chimney passing through the tank and protruding above at C. At the front end of the frame is the scrubbing brush, to which a quick reciprocating scrubbing motion is imparted by the rock shaft, levers, and other simple mechanism, actuated by a pinion which gears with the wheel, D. This brush is so placed that it receives the entire weight of the front part of the machine. Connected with the forward end of the tank is a horizontal sprinkler, E, in the pipe leading to which is a valve, F, by means of which the supply of water, which escapes in divided form upon the brush, may be regulated. To the handle of the apparatus is secured a clamp for holding mop rags or cloths, as shown. When the machine is set in motion the valve, F, is opened by a nut on the short arm of a vertical rod striking against the shaft, G, as it reciprocates with the brush, and water from the tank is admitted to the sprinkler. A spring closes the valve when the machine is not in motion. A filter, H, serves to remove all dirt from the water as it passes to the supply pipe, and the mop clamp can be adjusted to either side of the handle arms, so as to run close to the side of the floor or surface which is being cleaned. The brush may be of any suitable size, shape or material.

This new household implement will be found very useful where large floors are to be scrubbed, in rooms or halls. The inventor, Dr. Stockley, is at present in this city, at 429 Bush street, where he may be addressed for further information.

ACTION TO SET ASIDE LAND PATENTS.—A dispatch from Washington dated June 29th contains the following item of news on public land matters: "Secretary Schurz to-day officially requested Attorney-General Devens to institute proceedings against the Central Pacific Railroad Company to set aside the patents issued to that Company for about 20,000 acres of land situated within the claimed limits of the Manuel Dias grant, in Marysville land district. This grant was rejected by the Supreme Court in March, 1873. The lands were patented to the railroad Company under dates of March, 1872, March, 1875, and December, 1875. Secretary Schurz holds, that under the principles announced by the Supreme Court in the case of Newhall vs. Sanger, these lands, being within the limits of a private grant, were excepted from the operation of the railroad grant, and patents were issued for them erroneously, without authority of law. He also invites the Attorney-General's attention to the decision of Secretary Chandler in the California case of J. W. Harbison and others, in which it was held that the patents for lands then in question were erroneously issued, and the Commissioner of the General Land Office was instructed, July 12th, 1876, to call upon the Central Pacific Railroad Company to return them. Schurz informs the Attorney-General that this request has not been complied with."

PNEUMATIC GRAIN ELEVATOR.—The *Revue Industrielle* gives a description of a new pneumatic grain elevator, constructed by Renhaye. It consists of a centrifugal ventilator, the suction pipe of which is carried to a receiver placed upon the level to which the grain is to be carried. From the same receiver the supply pipe runs to the place from where the grain is to be lifted. Between the openings of the suction and the supply pipe of the receiver is an inclined plane, which throws the grain downward. A screen prevents the grain from entering the suction pipe, through which only the dust is carried off. A piston regulator at the lower end of the supply pipe acts in such a manner upon an adjustable nozzle that the proper proportion between the amount of air and grain admitted is automatically maintained. The principle upon which this pneumatic elevator acts is that when solid particles in movement in a pipe are mixed with air, a semi-fluid is formed in which the pressures vary in accordance to the laws governing ordinary fluids.

THE Los Angeles *Republican* learns of a recent fine strike of oil at a depth of about 1,000 feet in the well of the Los Angeles Oil Company, in the Sespe District. The well is said to yield 30 barrels per day of a fine quality of oil.

A BIG deposit of ice has been found in the Olympic mountains, Washington Territory, and the *Dispatch* says it can be brought to Seattle at a cost of \$5 per ton. Ice now costs \$80 per ton there.

WARREN LELAND has, according to report, retired from the management of the Palace hotel, in this city.

DEWEY & CO. American & Foreign Patent Agents

OFFICE, 202 SANSOME ST., N.E. COR. PINE, S. F.

PATENTS obtained promptly; Caveats filed expeditiously; Patent Reissues taken out Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

Foreign Patents.

In addition to American Patents, we secure, with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Baden, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Granada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule price for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) sooner than any other agents.

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more correctly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

Home Counsel.

Our long experience in obtaining patents for inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing to them the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applicants which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

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United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 202 Sansome St., N. E. corner Pine, S. F.

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In consequence of spurious imitations of which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

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which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

A Book for all That Have a Garden.

FRAGRICULTURE;

—OR THE—

Culture of the Strawberry.

A PRACTICAL TREATISE ON

Culture, Propagation, Management and Marketing of Strawberries. 1878.

Illustrated with Photographs, representing the average size of best varieties.

Especially adapted to the Family Garden.

BY FELIX GILLET,
Nevada City, Cal.

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Fragriculture; Description; Varieties; Selection; The Soil; Preparation of the Soil; Manures; Time of Setting Strawberries; Setting out Strawberries; Culture in Rows and Hills; Matted Row System; Mulching; Irrigation; Care of Plants after Setting; Propagation; Propagation by Seed; Resetting; Exposure; Annual Varieties; Biennial Varieties; Ever-bearing, or Wood Varieties; Bush-alpine Varieties; Staminate and Pistillate Plants; Hybridization; Forcing Strawberries; Care to Plants Forwarded by Mail; Duration of Strawberry Beds; Mode to Perpetuate Strawberry Beds; How to make Strawberries Last; Spring Work on Strawberry Beds; How to Raise Very Large Fruit; How to Pick and Keep Strawberries; Packing and Shipping; Insects Injurious to Strawberries; Maladies of the Strawberry; The Art of Preparing Strawberries; Preserving Strawberries; Medicinal Properties of Strawberries; General Hints on Fragiculture; Explanation of Photographs, and list of best varieties.

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Each photograph represents a group of strawberries—three to five—and not a single one, and is six inches by four inches.

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N. B.—The next school year will commence July 30th.

EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

"Faith and Confidence."

LIVERMORE, Oct. 1st, 1875.

MESSES. DEWEY & Co., Patent Solicitors: Gentlemen—Yours of the 29th ult., containing my patent to Elevated R. R. duly received, and I hereby return my sincere thanks to the MINING AND SCIENTIFIC PRESS Patent Agency for your promptness and honesty in regard to our business connections. I have received a flood of circulars from Eastern firms, desiring to deal with me, but I have declined any communication with them and prefer as soon as circumstances will permit, to negotiate with and patronize a home institution; one in which I have faith and confidence—DEWEY & Co.

Again thanking you for your promptness in securing my patent, I remain, obediently yours,

WM. H. HARRISON.

Lands for Sale and to Let.

Land for Sale in Napa County.

I am offering my lands in Foss Valley, ten miles north of Napa City, for sale, as follows—to wit:

One tract of 800 acres, including my homestead, 220 acres of which is choice valley land, the balance good grazing land, is well watered, has a large supply of wood, is well improved, has a comfortable dwelling of nine rooms, barn, granary, sheds, etc. Also, a good orchard and choice vegetable garden. Price, \$15.00 per acre.

Also, one tract of 1,020 acres, about 100 acres of which is valley, the balance good grazing hills, is well watered and has enough wood on it to pay for it. Price, \$5.00 per acre.

Also, one tract of 300 acres, 40 acres tillable, a portion can be irrigated from springs, has a large amount of wood on it and 500 rods of stone fence. Is well suited to running a small dairy, and raising pigs and chickens, by which a good living can be made, price \$2,000. The climate is choice, being shut in from the chilly coast winds, but has just breeze enough to make it pleasant, title perfect.

The above lands lay contiguous. I will sell the whole or either one of the above tracts on easy terms. A liberal portion can remain at 10 per cent. per annum. If desired, will sell with the land, 1,500 head of Spanish Merino sheep. Come and see me, as I am determined to sell. Address the undersigned at Napa City. WILLIAM CLARKE.

FINE RANCH FOR SALE.

One thousand six hundred acres of deeded land, in T. P. 19, N. R. 6 W., in Colusa County, situated near Stony Creek, on the county road, from Leesville to Elk Creek, comprising No. 1 farming land, and first-class grazing lands, all enclosed. Good house, seven rooms, well finished and painted. Two large barns, one wagon house, one wool house, large store house, wood house and other small buildings complete. Two good wells of pure cold water and a large spring of never-failing water running about one mile through the ranch. The house is surrounded with shade and ornamental trees. All the farming utensils and about 50 tons of hay will be thrown in if purchased soon. Any one wishing to engage in the dairy, or stock business of any kind, cannot find a better location in the State. Price, \$7.50 per acre, one half down and the balance to suit purchaser. For further particulars, apply to James W. Good, Colusa, or the undersigned.

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Elk Creek P. O., Colusa County, Cal.

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\$4,000.—Two Hundred Acres of Land in Mendocino County.

Thirty miles from the county seat, and 20 miles from the Coast, one of the healthiest localities in the State, especially for consumptives. The place is fenced off in six different fields. Plenty of water and timber for all purposes. A good orchard. Vegetables of all kinds grow well. A good dwelling with six rooms, ceiling and painted inside, good frame barn, granary, storehouse, smokehouse, etc.

Also, Six Hundred acres of grazing land, well fenced, three miles from the above farm, plenty of water and timber for all purposes. Price, \$2,250.

For further particulars, address "B. T.," care of DEWEY & CO., PACIFIC RURAL PRESS office, San Francisco, Cal.

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If favored with your orders we will furnish you with first-class farm hands of any kind you may wish. We are men of experience and know how to select good help. We have also constantly on hand, Blacksmiths, Milkers, etc., and in short, skilled and unskilled labor of all classes, male and female. Try our agency before sending elsewhere. French, German and Scandinavian spoken by the proprietors.

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Is now offered for sale at low prices and on favorable terms of payment,

In Sub-Divisions to Suit Purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends some 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drouth.

The climate is very healthful and comparatively desirable. The near proximity of high mountain peaks give cool nights during the "heated terms" which occur in our California summers.

Soft well water—remarkably sweet, pure and healthy—is obtainable at a depth of from 15 to 35 feet.

Wood is plentiful and easy to get.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract. Also, Vegetables, Corn and all other cereals ordinarily grown in the State.

A considerable amount of the rich bottom land has already been cultivated.

Deep Soil With Lasting Qualities.

The soil throughout the tilled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading—all of which are located within the limits of the ranch.

For Colonies.

Land suitable for settlers in colonies can be obtained on good terms.

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Are offered for sale in Reading, situated on the Sacramento River, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor,

EDWARD FRISBIE,

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BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

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BARRETTO & CO., Downey City, Cal., breeders of thoroughbred Jerseys. Bulls and Bull calves for sale.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

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Cor. Sixteenth and Castro Streets, Oakland. Constantly on hand and for sale, choice specimens of the following varieties of Fowls:



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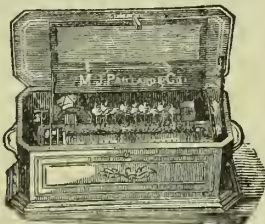
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Have located in Grass Valley, Wasco County, on the line of the Dalles Military Road, 20 miles from the Columbia River, between the Deschutes and John Day Rivers; 31 miles from the Dalles.

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Is located on a small stream, fed by numerous springs, in the center of a beautiful rolling prairie, 50 miles long by 30 miles wide, of the very richest soil, heavily covered with fine bunch grass.

A Plenty of Government Land for All.

The climate is (unlike Western Oregon) dry and delightful, all kinds of Grain, Fruit and Vegetables, etc., grow perfection. Average wheat crop—46 bushels per acre.

640 Acres Secured for a Town-site and Called Lockville.

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Hotels, Stores and a large number of Houses already in course of construction. Immigrants will do well to look at this location before going further north.

A Stage will soon leave the Dalles, (from the Pioneer Hotel,) daily for Lockville.

EASTERN OREGON COLONIZATION COMPANY.

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J. B. DOW, Treas.

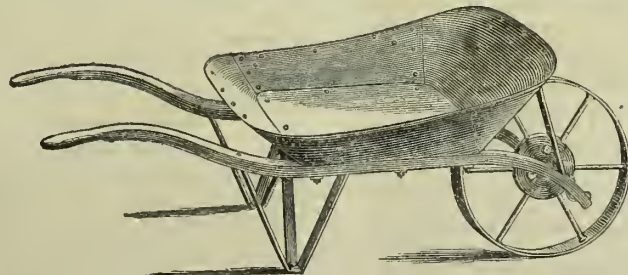
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REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

The Resources and History of Shasta County.—No. 3.

Anderson.

This is a comparatively new town, 12 miles south of Reading, on the railroad. It has a location about three-quarters of a mile from the river, and second only to Reading in point of beauty. The largest body of fine farming land in the county lies near this town, below it, on the river, so that as the land is settled up the town must grow considerably. Quite a shipping and freight business is done from this place. One of the two stores in the place does a business of about \$80,000 per annum. There is one hotel and will soon be another. Its citizens are hopeful that a change of route by the railroad company, or the construction of a narrow-gauge road to Millville, may make Anderson the leading town, it being most central in the farming interests.

Igo

Is a lovely little mining town, some 12 miles west of Anderson. The immense gravel mines of Alvinza Hayward, which have cost over half a million, are situated here. A number of beautiful ranches lie near it and little orchards and alfalfa patches predominate. Water can be bought from the mining ditch at a low rate. Much mining on a small scale is done. There is some black-oak government land in this section, which is well worth taking up.

Millville

Has for a long time been the farming region of the county. It is some 14 miles east of Reading, at the base of the Sierras, and near a number of charming streams. A glance at the map will show that this is a well-watered region. The Millville country is full of interest. The town site is pleasant and there are numerous little farms up all the creeks. The town has a stone church and school-house, a newspaper, the *Record*, thriving stores, hotels, etc.

The early history of the town is full of interest. Saw-mills were built in the mountains, and men began raising hay and potatoes at a very early date. Various Indian troubles followed, the great Oregon trail of the tribes being a few miles east. Gradually settlers came in, taking up the rich bottom lands. Millville is now a healthy and hopeful town, with the best kind of people to help her along.

In the Northern Part

Of the county are several fertile valleys—Burney valley, Big valley, etc.; also the famous Fall river, where enough water-power to turn all the mills of Lowell goes to waste.

Leading Interests—Mining.

Of course the mines come first. Shasta has had her full share in the gold production, and only the surface has as yet been touched. Quartz mining is coming to the front of late years, but fully one-third of the whole area of Shasta abounds in fine gold, more or less abundant, and a great many persons make wages, and often better, by working on small claims through the winter.

The writer has personal knowledge of places where from \$3 to \$8 can be safely counted on. Silver mines are comparatively new, but promise to become a leading industry. The Afterthought, owned mainly by A. J. Loomis, the mines at Copper City, Peck's mine and a mine near Igo, show ore of the very best quality. Capital has taken hold and erected mills, which will begin work soon. The ore body at Copper City is immense, and, although by early processes refractory, yet there is every reason to believe that the present "leaching" system is a success.

The Extra mining company, at Copper City, are busy grading and laying the foundation of their mill, the location of which is very advantageous.

The Winthrop mining company will also put up a mill this summer, and no doubt arrangements will be made by other companies to put up mills soon. The cause for all this business and expenditure of money is apparent to persons who visit these mines. From the prospecting already done and the developments made, we are justified in saying that Killinger hill is nearly a solid body of silver ore, which assays, so far as it has been practically tested, an average of \$140 to the ton, about 8% of which is gold.

Shasta has mines of marble, coal, copper, quicksilver and indications of almost every other valuable mineral. Most of the prospecting has been done with a view to the precious metals only, so there is a vast field in other directions. The mining region of Shasta covers the western third mainly. There is a prosperous camp of placer miners at Buckeye, a few miles north of Reading. A portion of the Reading grant, and that which is offered for sale at the lowest rates, is valuable gravel for prospective hydraulic mining.

The lumber interests of Shasta are large. No other county contains so much virgin forest of sugar and yellow pine. The entire eastern third is densely timbered mountains, full of clear streams, healthy, and, when cleared, fertile. The Sierra Plume Company, working north from Tehama, has got hold of large tracts, but thousands of acres are as yet unsurveyed, unclaimed and unsettled. These Sierra mountain lands, when cleared, produce the best of hay, grain, potatoes and fruits.

The Southern express from Philadelphia was thrown from the track near Claymont, Del., on the first inst., and the engineer and fireman were killed.

Friendlander's Grain Circular.

Mr. I. Friedlander has issued his Annual Grain Circular, dated San Francisco, June 30, 1878. After reviewing the wheat market for the past year, the Circular says:

The only other noticeable features of the wheat market during the year were the shipment of a few cargoes of wheat and flour to the west coast of South America, and a few to the Cape of Good Hope; but these were ventures on the part of merchants there, and it is questionable whether any of them left much profit. A great deal of dissatisfaction has arisen among our merchants during the year, caused by the unusual number of arbitrations called for on California cargoes arriving out, and the singular unanimity with which allowances have been made against shippers. During past years it has not been unusual to ask reclamation against quality, but it never before reached the point it did last season, when in some cases notice was given absolutely before the hatches had been removed. Our exporters have been so annoyed by this system that they have been forced to take steps to protect themselves, and it is to be hoped that they will prove effective. The Oregon crop of 1876-7 was better than an average one as far as yield was concerned, but the quality was hardly up to that of previous years. Low steamer freights, brought about by opposition, resulted in large shipments to this port, but in addition, seventy-two vessels cleared from the Columbia river for European and other ports, bearing away about 150,000 tons of wheat. The new crop will be reaped in August, and promises to be a good one in every respect, although of late some complaints have been heard of unseasonably hot weather.

We now hand you our usual statistical tables of receipts and exports, running through a series of years, as also detailed tables of exports, showing the various points with which we did business during the cereal year just closed.

Receipts of Grain and Flour (California Produce Only) at the Port of San Francisco.

Year Ending.	Wheat.	Barley.	Oats.	Flour.
cts.	cts.	cts.	cts.	bbls.
July 1st, 1862.....	1,451,465	612,014	343,808	111,269
July 1st, 1863.....	1,890,777	435,945	172,896	149,825
July 1st, 1864.....	1,843,840	623,266	304,504	99,298
July 1st, 1865.....	509,163	415,944	255,839	61,670
July 1st, 1866.....	2,142,212	998,724	320,769	166,843
July 1st, 1867.....	5,218,536	7,02,064	327,954	300,397
July 1st, 1868.....	5,041,194	7,02,105	337,177	206,176
July 1st, 1869.....	6,341,383	626,856	254,390	207,980
July 1st, 1870.....	6,565,066	755,361	317,920	171,108
July 1st, 1871.....	4,780,253	700,056	317,506	120,913
July 1st, 1872.....	2,395,008	704,693	334,085	146,749
July 1st, 1873.....	1,148,500	1,095,309	237,450	228,900
July 1st, 1874.....	8,073,291	1,211,062	252,516	470,631
July 1st, 1875.....	8,837,660	1,296,808	254,707	448,419
July 1st, 1876.....	6,653,728	1,175,270	237,099	473,568
July 1st, 1877.....	11,155,601	1,530,320	293,679	515,014
July 1st, 1878.....	4,383,297	835,827	128,599	379,456

In addition to the above, we have received from Oregon, 553,995 cents of wheat, 7,766 do of barley, 179,946 do of oats and 97,070 bbls of flour. Our total receipts, therefore, foot up: 4,942,292 cents of wheat, 843,593 do of barley, 308,545 do of oats and 476,526 bbls of flour.

Exports of Grain and Flour from the Port of San Francisco.

Year Ending.	Wheat.	Barley.	Oats.	Flour.
cts.	cts.	cts.	cts.	bbls.
June 30th, 1862.....	775,553	132,805	140,822	82,601
June 30th, 1863.....	1,159,748	30,424	39,511	141,488
June 30th, 1864.....	984,941	42,292	55,951	158,225
June 30th, 1865.....	23,818	8,104	3,511	52,424
June 30th, 1866.....	1,044,826	338,106	115,818	249,857
June 30th, 1867.....	3,642,550	166,212	88,414	485,493
June 30th, 1868.....	3,773,002	31,414	4,957	426,157
June 30th, 1869.....	4,373,213	91,880	22,499	459,923
June 30th, 1870.....	4,864,590	300,621	13,858	354,106
June 30th, 1871.....	3,583,124	132,095	12,508	194,763
June 30th, 1872.....	1,404,355	16,286	11,240	292,308
June 30th, 1873.....	9,835,571	226,922	5,401	294,529
June 30th, 1874.....	7,289,278	599,109	26,617	674,698
June 30th, 1875.....	8,333,850	702,173	67,944	525,614
June 30th, 1876.....	6,113,695	426,031	5,695	503,513
June 30th, 1877.....	10,627,664	554,291	3,141	507,486
June 30th, 1878.....	3,942,612	85,891	11,618	442,358

Wheat.—The first new wheat of the season made its appearance in this market June 14th. Since then, as is usually the case, receipts have been very light, and we cannot expect them to become any way free until the middle of July. The important question of yield and surplus is a very vexed one, and it is difficult to find two people among judges who arrive at the same conclusion. The planting season was deferred to a very late date in consequence of absence of rain, and when the season really opened (January 11th), the outpour was so continuous and lasted so long, that in many districts it was impossible to get the land in tillable shape until it was too late to give any certainty of a crop. As is always the case, a large portion of the State had been seeded to summer-fallowed land, and consequently had the benefit of all the rains, but such was the wonderful outpour of water during the months of January and February, that while many of the finest districts were so "washed" as to destroy a considerable portion of the growing grain, other large sections were entirely overflowed by the rivers, and the crop utterly destroyed. Still for every acre destroyed or rendered unfit for cultivation, it is probably safe to say that five were brought into bearing. The outlook for the largest crop ever harvested in the State continued most favorable until within the last fortnight, when rust made its appearance in many sections, and in some has worked great injury. It is impossible, as yet, to say how much damage has been done, but it undoubtedly is considerable, and will in many districts materially curtail the yield. Still, taking everything into consideration, it seems probable that we will export as much wheat as we did from the harvest of 1876, which was within a trifle of 600,000 short tons.

Sales of new crop have been made to the extent of say 20,000 tons to load ships now here or to arrive in July, at \$1.70 to \$1.65 for July delivery, and \$1.65 to \$1.62½ for August. Farmers, however, are naturally indisposed to sell, at least until their wheat is harvested and they know what they have for sale, and meantime with a declining market in England, and the prospect of another magnificent crop in the northwest, buyers are by no means anxious for wheat, and we look for a dragging market for several months to come, unless unfavorable weather in England and the Continent during harvest time should cause an advance there, and consequently higher prices here. We have, however, a large amount of tonnage here and on the way, all of which will have to be loaded with wheat, and this will place our market, to a great degree, in an independent position, no matter how large our surplus may be, and shift the profit or loss on shipments on to the freight instead of the wheat. As regards the quality of the new crop it is too early to speak with much confidence, but the long continued rains of the early spring, render certain a large amount of foul wheat, while the rust of the latter part is sure to pinch a great deal of good grain and render it unfit for shipment. Still we have some immense areas of perfectly clean wheat which will produce an admirable crop, and we have little doubt that the bulk of our exports will be up to the standards of former years.

Barley.—The unfavorable character of the season of 1876-77, was manifested more particularly in the yield of barley than in any other of our cereals, the districts best adapted to the culture of that grain having been subjected in an especial degree to the drought that in that unfortunate season scourged our whole State. The crop was a very poor one in the best of these sections, and, in most, was an entire failure. The business of the year was consequently a very poor one, and almost entirely local, our exports amounting to hardly a sixth of those of the preceding year. Our list of exports show a lamentable falling off in all directions, South America taking almost nothing, and Australia very little, while none at all was sent by rail to the Mississippi valley, these having been in previous years our great points for shipment. The crop now being harvested is undoubtedly one of the largest, if not the very largest ever raised in the State, and much of it will be of a very superior quality. Such samples as have reached market indicate excellent color and weight; but late rains are reported to have damaged a good deal of grain in the southern coast counties. New feed opened at 85 cents per cental, and the impression is general that extremely low prices will rule. It is to be hoped that openings will be found for our surplus, and with fair rates of freight to Australia (by steamer) and to Chicago and St. Louis (by rail) we hope to see much of the grain utilized. At best, however, it is difficult to see how the crop can prove a profitable one to producers.

Oats.—Dealers are looking forward to a possible trade with Australia during the coming three or four months, but no orders have appeared so far, and the whole business at the best will be insignificant. As far as we can learn, the growing crop promises to be better than an ordinary one.

Flour.—Our exports of Flour during the past year show a falling off of some 60,000 bbls., which is not surprising when we consider the high prices that ruled for wheat during that period. The decline has been chiefly in shipments to Liverpool, to which port we sent but 116,000 bbls., against 250,000 bbls. the year before. This trade has not been a very satisfactory one, and is not likely to assume as large proportions as it did in 1876 for years to come, the shipments being made by one milling establishment which thus seeks an outlet for its goods. The trade with China and Japan on the other hand shows a considerable increase, while we have made a decided gain in shipments to South America and have held our own in our trade with Mexico, Central America and the Islands of the Pacific.

Farmers! Farmers!!

Throughout California are requested to send their orders for any kind of labor to the "Free Labor Exchange," 33 and 35 O'Farrell Street, San Francisco. All hands carefully selected free of charges to employers and employees.

"CASH PAID PROMPTLY."—May Bros., Galesburg, Ill., want to hire agents for their late improved Windmills, the cheapest, strongest and best in use. Retail price, \$50. Write for terms.

Woodward's Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a box-constructor have just been added. New swans are constantly engaged for the Pavilion exercises. Rates of admission as usual.

POPULAR MUSIC.—Make your homes merry and popular with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. THE RURAL PRESS can offer to introduce you there.

Hearing Restored. Great invention by one who was deaf for 20 years. Send stamp for particulars. VERRY & HARPER, Lock Box 80, Madison, Ind.

S. F. MARKET REPORT.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 2d, 1878.

The grain circles are not a little agitated by the reports of rust in various parts of the State, and estimates of aggregate yields are being reduced. In our "Agricultural Notes" columns may be found reports from several countries on this subject. Wheat is slow to arrive and the market cannot be called open yet. Everything concerning ruling price is uncertain and liable to be greatly affected before the trade really begins.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.	CLUB.
Thursday.....	10s —@10s 5d	10s 4d@10s 8d
Friday.....	9s 11d@10s 3d	10s 3d@10s 9d
Saturday.....	9s 11d@10s 3d	10s 3d@10s 9d
Monday.....	9s 11d@10s 3d	10s 3d@10s 9d
Tuesday.....	9s 11d@10s 3d	10s 3d@10s 9d
Wednesday.....	—@—	—@—

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.	Club.
1876.....	9s 11d@10s 2d	10s 4d@10s 6d
1877.....	12s 5d@12s 8d	12s 10d@13s 2d
1878.....	9s 11d@10s 3d	10s 3d@10s 8d

The Foreign Review.

LONDON, July 2d.—The *Mark Lane Express* says. There is a decided change for the better in the appearance of growing Wheat, which is now in full bloom. At first sight the fields seem to promise large crops, but in many fields the ears are small. With the exception of Barley and Oats, appearances at present point to a fair average yield of cereals, but the quality is likely to be mediocre. Insignificant supplies of English Wheat at Mark Lane and provincial markets indicate a rapid depletion of stocks in farmers' hands and that little or nothing will be left over at harvest time. Imports of foreign Wheat into London have been more moderate of late, but supplies go into the granary rather than into consumption. Small lots of white Wheat have been taken off the stands for continental account, principally for Belgium and north of France, where the crops are unsatisfactory and prices several shillings higher than in London, but no further sales of cargoes off coast have taken place. Maize has not undergone much change on spot, but new mixed American to arrive was offered at 22s 6d per quarter, ex ship, a price hitherto unknown for this article. With liberal arrivals at ports of call, the floating cargo trade for Wheat is dull and prices declined fully 1s per quarter. Maize and Barley receded fully 6d per quarter.

Freights and Charters.

There is no present demand for tonnage, and rates entirely nominal at say 50¢/55 for Wheat to Liverpool July-August loading. There are in port engaged for Wheat 45,221 tons shipping, disengaged 51,500, loading general merchandise 3,178 tons; on the way to this port, so far as known, 224,000 tons.

Eastern Grain Markets.

NEW YORK, June 29th.—The excessive heat of the last three days has not been conducive to business activity, and the markets have been quiet all through the week. Merchandise prices have ruled quite steady, but most kinds of produce show a further decline. This is notably the case with Wheat, which has fallen to the lowest point in a long period, No. 2 Spring having sold down to 97¢/98¢, under the depressing influence of an overwhelming harvest and peace in Europe. The whole range for Wheat is 90¢ to \$1.15, the latter price for handsome White Michigan. Samples of new Winter Wheat and also of new Flour from the border States have been received and are of excellent quality. Shipping Flour is down to \$3.90¢/4.75. Corn is worth 40¢/45, and Oats 29¢/37. These low prices have promoted exports, the shipments of the week having been quite evenly divided between the United Kingdom and the Continent, rates of freight varying from 5s 6d to 6s 3d per quarter.

CHICAGO, June 29th.—The closes with Wheat decidedly lower than last week, with Corn rather firmer. Oats higher, and the Provision Market strongly tending to old prices. Wheat, for July, sold at 86¢/91¢. The market was active, unsettled and irregular, with a good speculating demand and a heavy downward pressure on certain days, reaching the lowest point for nearly two years. Corn was very steady, but ruled higher and closed firm. Sales of July at 35¢/36¢. Oats were steady and firm, with sales of July at 23¢/23½. The grains have been growing at prodigious rates during the past two weeks, under the effects of splendid warm weather, and it is estimated that it is worth \$4,500,000 per day to the Northwest to have it continue. Farmers, even, are satisfied with the prospects. Rye, for cash, sold at 49¢/52, closing at the inside. Barley, under the influence of a large "short" interest which has begun to buy, advanced from 48¢ to 49¢. Provisions were in only fair demand, but prices were unstable, with tendencies to hop up. Pork, for July, sold at \$9.07¢/9.50. Lard, for July, \$6.80¢/6.97. The closing cash prices are: Wheat, 82¢/89; Corn, 36¢; Oats,

24c; Rye, 49c; Barley, 49c; Pork, \$9.30; Lard, \$6.82@6.85.

Eastern Wool Markets.

NEW YORK, June 29th.—The market, though not showing increased activity, presents a much firmer appearance, which is due to the extreme rates paid in the country, and not to any improvement in the goods market. The latest advices state that the excitement has in a measure subsided, and although farmers are apparently firm in their demands, buyers are holding back for a lower range. Considerable new Wool has been received from States other than Ohio, but buyers manifest no disposition to purchase liberally, being unwilling to stock their mills with material that will not be needed for perhaps some months to come. The following cable has been received from the London sales: "The competition was exceedingly spirited, with considerable excitement current. Average Port Phillip, 134; Bradford, strong. Sales for the week include 150 bales Cordova, at 17c, gold; 45,000 lbs Spring California, 22½@25c; 10,000 lbs slightly burry do, 20c; 10,000 lbs Colorado, 16c; 55,000 lbs Western Texas, 15@17c; 70,500 lbs Spring do, 18@24½c; 30 bags Domestic Noils, 40c; 15,000 lbs X (and above) Ohio, 35c.

Boston, June 29th.—There was a fair business done the past week, the total sales comprising 1,296,000 pounds. The comparatively high prices of new Wool in the Western States have led to a firmer feeling for desirable lots of old, and holders are now quite indifferent about selling, as they feel that their Wool cannot be replaced at present rates; but while buyers are rather more free purchasers at previous prices, they are not disposed to pay any advance. Good average lines of XXXX Ohio and Pennsylvania fleeces could be sold quite freely at 35@66, and Michigan and Wisconsin at 33@35, but any advances on these prices would put a stop to business. Combing and delaine fleeces are in better demand than for some time past, and manufacturers are now ready to purchase. Sales for the week include Ohio fleeces No. 1, X and XX, at 35@38; Michigan fleeces, 33@36; delaine and combing, 37½@45; unwashed do, 23@31; Texas, 20@29; unwashed fleeces, 20@20; scoured, 45@70; super and X pulled, 25@43½. Transactions in California Wool footed up 463,000 pounds Spring and Fall, at 29@30 for Spring, and 17½@20 for Fall, the latter mostly at 18.

Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. June 12.	WEEK. June 19.	WEEK. June 26.	WEEK. July 2.
Flour, quarter sacks..	30,767	40,593	31,701	13,503
Wheat, centals.....	12,954	27,317	37,945	53,676
Barley, centals.....	9,812	18,479	22,600	18,157
Beans, sacks.....	250	163	365	139
Corn, centals.....	2,622	5,785	2,003	9,796
Oats, centals.....	8,554	3,523	6,167	6,154
Potatoes, sacks.....	7,220	8,004	9,388	6,747
Onions, centals.....	626	1,350	864	673
Wool, bales.....	4,254	1,343	5,856	2,249
Hops, bales.....	65	150	22	.....
Hay, bales.....	1,355	1,267	1,742	1,789

BAGS—To-day grain Bags are a fraction lower than last week. Dealers say that various motions are in progress, and both "bulls and bears" are at work in the trade. Some change will doubtless occur soon, but the wise do not know whether the price will go up or down.

BARLEY—There is no change in Barley. New Barley is arriving but sales are not large. A cargo of new is reported sold at 90c; 1,160 do fair old Feed at 92½c, and 250 do old Brewing, weavily, at \$1.05; 1,000 cts fair new sold at 87½c, and 1,000 old ordinary Brewing at \$1.07½ cts.

BEANS—Small lots are still arriving and selling at last week's prices.

BUCKWHEAT—The ruling price is still \$1.50 per cts, but a lot of 100 sks is reported sold at \$1.65.

CORN—Corn from the prairie States continues to arrive and goes to meet the Mexican demand. Four car-loads from Omaha sold for Mexico at \$1.92½ per cts; 100 sks large yellow California brought \$2.02½ per cts.

DAIRY PRODUCE—Butter is unchanged either in supply or price. Receipts are fairly taken at the low prices. Cheese is unchanged.

EGGS—Eggs are a shade weaker. There has been a small lot of eggs brought in from Omaha on a passenger train, which sold at 22½c@24c per doz.

FEED—An advance of \$1 per ton is made on bran by the millers. Hay sells within former range, most receipts being only of medium quality. We note Hay sales: Cargo fair wild Oat at \$9.75; 20 tons Stock at \$7; 8 tons do at \$8; cargo of wild Oat at \$10.50, and a mixed cargo at \$11; cargo of choice wild Oats sold at \$13.

FRESH MEAT—Fresh Meats of all descriptions are low and the supply abundant. We note a reduction in prices of mutton and un-dressed pork.

FRUIT—Fruit is coming in freely, and prices reach mid-summer cheapness. Our price list below shows particulars in this direction.

HOPS—There is no change in Hops. The amount here is small and some will doubtless be held to work in with the new crop. Better prices may be expected in the future, for, unless the advance comes before harvest, there will be a disposition against harvesting some fields, and thus the supply will be decreased and future values enhanced. Emmet Wells reports the New York market for the week ending June 21st, as follows: "Crop reports on the whole

are somewhat more favorable this week, the warm weather coming just in time to give the vine a fresh start; though it must be admitted that the damage it has sustained throughout the great Hop districts of New York by frost and cold is more serious than was at first supposed, and cannot be wholly retrieved by any amount of fine weather from this time out. Many contend that this State will not produce more than half as many Hops as last year. From Wisconsin comes the news that the vine is in very poor condition; but this is offset by favorable accounts from the Pacific Coast. The Times, published at Waterville, N. Y., (The great Hop-producing center of America,) has nothing to say this week, from which it is inferred that everything in that district is coming on all right. Holders here have put up the price 2 cts per lb all round, and buyers have submitted to the advance, but the stock to choose from is very mixed and indifferent."

ONIONS—The best Onions now in are Silverkins, from San Leandro, which sell for \$1.12½ to-day. Stockton's and Sacramento River's are \$1 per cts for good.

POTATOES—An advance is noted in new Early Rose; the extreme, \$2.50 per cts being for choice lots in boxes.

POULTRY—The hurry of harvest restricts the shipment of Poultry somewhat, and prices are a little firmer this week all round.

PROVISIONS—The supply of Cured Meat products is moderate; prices are firm at quotations, and show an advancing tendency, particularly in Bacon, which is relatively much lower than Hams. Moderate invoices are now arriving from Oregon by each steamer.

VEGETABLES—There is a cheapening noted in String Beans, Peas, Cauliflower and Summer Squash. Melons are just in; Musk Melons selling at \$2.50@3.50 per doz. Watermelons came in to-day but we did not learn selling price.

WHEAT—The market is without change and no large transactions are divulged. The following are among the sales reported during the week: 1,000 sks fair new, sold at \$1.62½, and 200 do at \$1.60; 200 cts at \$1.52½; 1,000 (delivered at Oakland wharf), at \$1.60, and 5,000 (at Vallejo), at \$1.60; 20,000 cts good new for immediate delivery at \$1.62½; 900 cts old Walla Walla at \$1.62½; 750 fair new Shipping at \$1.55; and 3,000 cts, July delivery, at \$1.65 per cts.

WOOL—Dealers report a better demand for good Wools, but no material change in price, excepting for some choice lots, which brings a shade higher. The highest point reported to us is 25½ for choice Humboldt county. We note sales 250,000 lbs good to choice, 20@25½; 50,000 lbs low grade and common, 14@17 per lb.

DOMESTIC PRODUCE.

(WHOLESALE.)

TUESDAY M., July 2, 1878.	
Bayo, cts.....	5.75 @ 6.00
Butter.....	4.25 @ 4.50
Peas.....	4.45 @ 4.75
Red.....	— @ —
Pink.....	6.25 @ 6.50
Small White.....	6.75 @ 7.00
Lima.....	4.25 @ 4.50
BROOM CORN.	
Old.....	3½ @ 4
New.....	4½ @ 5
CHICKEN.	
California.....	4 @ 4½
German.....	5½ @ 6
DAIRY PRODUCE, ETC.	
BUTTER.	
Cal. Fresh Roll, lb.....	19 @ 22
Fancy Brands.....	24 @ 25
Pickle Roll, new.....	22½ @ 24
Firm, old.....	12 @ 16
Western Reserve.....	12½ @ 14
New York.....	— @ —
CHEESE.	
Eastern.....	8 @ 11
Western.....	10 @ 12
N. Y. State.....	— @ —
Gilroy Factory.....	12½ @ 13
EGGS.	
Cal. fresh, doz.....	26 @ 28
Ducks.....	23 @ 24
Oregon.....	22 @ 23
Eastern.....	16 @ 19
do Pickled.....	— @ —
FEED.	
Bran, ton.....	— @ 15.00
Corn Meal.....	42 @ 43.00
Hay.....	7.00 @ 14.00
Middlings.....	21.00 @ 22.50
Oil Cake Meal.....	34.00 @ —
Straw, bale.....	25 @ 30
FLOUR.	
Extra, bbl.....	5.25 @ 5.50
Superfine.....	4.25 @ 4.37½
Graham, lb.....	3½ @ 3½
FRESH MEAT.	
Beef, 1st quality, lb.....	5½ @ 6
Secord.....	4½ @ 5
Third.....	3 @ 3½
Mutton.....	3½ @ 4
Spring Lamb.....	5 @ 6
Pork, undressed.....	5½ @ 5½
Dressed.....	7½ @ 7½
Veal.....	6 @ 8
Milk Calves.....	6 @ 7½
GRAIN, ETC.	
Barley, feed, cts.....	80 @ 95
Brewing.....	1.10 @ 1.20
Chevalier.....	1.50 @ —
Buckwheat.....	1.30 @ —
Corn, White.....	2.10 @ 2.25
Yellow.....	2.00 @ 2.05
Small Round.....	2.00 @ 2.10
Oats.....	25 @ 45
Milling.....	55 @ 65
Rye.....	1.25 @ 1.50
Wheat, Shipping.....	1.60 @ 1.65
Milling.....	1.70 @ 1.80
HIDES.	
Hides, dry.....	14 @ 15
Wet salted.....	8½ @ 9½
HONEY, ETC.	
Beeswax, lb.....	14 @ 31
Honey in comb.....	14 @ 15
do, No. 2.....	12½ @ 14
Dark.....	10 @ —
Strained.....	6½ @ 8
HOPS.	
Oregon.....	4 @ 5
California.....	4 @ 7
Wash. Ter.....	4 @ 6
NUTS—Jobbing.	
Walnuts, Cal.....	8 @ 9
do Chile.....	7 @ 8
Almonds, hd sh lb.....	7 @ 8
Soft sh.....	14 @ 16
Brazil.....	14 @ 16
Pecans.....	13 @ 14
Peanuts.....	5 @ 6

GENERAL MERCHANDISE.

(WHOLESALE.)

TUESDAY M., July 2, 1878.	
BAGS—Jobbing.	
Eng Standard Wheat, 11' @ 11½	—
Neville & Co's	—
Hand Sewed, 22x36, 11' @ 11½	—
24x36.....	— @ —
Macbue Sewd, 22x36, — @ 11	—
Flour Sacks, halves.....	8½ @ 10½
Quarters.....	5½ @ 6½
Eighths.....	4 @ 4½
Hessian, 60 inch.....	15 @ —
45 inch.....	9½ @ 10
40 inch.....	9 @ —
Wool Sacks.....	— @ —
Hand Sewed, 3½ lb., 47½ @ 50	—
4 lb do.....	52½ @ —
Machine Sewed.....	47½ @ —
Standard Gunnies.....	14 @ 15
Bean Bags.....	7 @ 8
CANDLES.	
Crystal Wax.....	17 @ —
Eagle.....	12 @ —
Patent Sperm.....	30 @ 34
CANNED GOODS.	
Assorted Pie Fruits.....	— @ —
2½ lb cans.....	2.75 @ 3.00
Table do.....	3.75 @ 4.25
Jams and Jellies.....	4.25 @ —
Pickles, hf gal.....	3.50 @ —
Sardines, qr box.....	1.65 @ 1.90
Hf Boxes.....	3.00 @ —
BEER.	
2 lb doz.....	4.00 @ —
do Beef, 4 lb doz.....	6.50 @ —
Preserved Mutton.....	— @ —
2 lb doz.....	4.00 @ —
Beef Tongue.....	6.50 @ —
Preserved Ham.....	— @ —
2 lb doz.....	6.50 @ —
Deviled Ham, 1 lb.....	5.50 @ —
do Ham, 4 lb doz.....	3.00 @ —
COAL—Jobbing.	
Australian, ton.....	7.00 @ 7.25
Coos Bay.....	6.50 @ 7.00
Bellingham Bay.....	6.50 @ —
Seattle.....	5.50 @ 6.50
Cumberland.....	4.00 @ 5.00
Mt Diablo.....	4.75 @ 6.00
Lehigh.....	22.00 @ —
Liverpool.....	7.00 @ 8.00
West Hartley.....	7.50 @ 9.00
Scotch.....	6.50 @ 8.00
Scranton.....	13.00 @ 16.00
Vancouver Id.....	7.50 @ —
Charcoal, sack.....	75 @ —
Coke, bbl.....	60 @ —
COFFEE.	
Sandwich Id, lb.....	21½ @ —
Costa Rica.....	18 @ 18½
Guatemala.....	17 @ 18½
Java.....	22½ @ 23
Manila.....	17½ @ —
Ground, in cs.....	25 @ —
FISH.	
Sac'to Dry Cod.....	5 @ 5½
do in cases.....	6½ @ 7
Eastern Cod.....	7½ @ 8
Salmon, bbls.....	9.00 @ 10.00
Hf bbls.....	5.00 @ 5.50
1 lb cans.....	1.25 @ 1.30
Pkld Cod, bbls.....	22.00 @ —
Hf bbls.....	11.00 @ —
Mackerel, No. 1.....	— @ —
Hf Bbls.....	9.50 @ 10.50
In Kits.....	1.85 @ 2.10
do Meas.....	3.25 @ —
Pkld Herring, bx.....	3.00 @ 3.50
Boston Smkl Hg.....	70 @ —
LIME, ETC.	
Lime, Sta Cruz.....	— @ —
bbl.....	2.00 @ 2.25
Cement, Rosen- dale.....	2.75 @ 3.50
Portland.....	4.75 @ 5.50
FRUITS AND VEGETABLES.	
TUESDAY M., July 2, 1878.	
FRUIT MARKET.	
Apples, basket.....	30 @ 50
do, box.....	1.00 @ 1.75
Apricots, lb.....	3 @ 4
apricots, bnch.....	1.00 @ 3.00
Blackberries, lb.....	9 @ 12½
Cocoanuts, 100.....	5.00 @ 6.00
Cherries, lb.....	17½ @ 25
Currents, chest.....	5.00 @ 6.00
Figs, lb.....	8 @ 13
Gooseberries, lb.....	6 @ 8
Limes, Mex.....	10.00 @ 12.00
do, Cal, per M.....	— @ —
Lemons, Cal M.....	15.00 @ 20.00
Sicily, bx.....	9.00 @ 10.00
Mangoes, 100.....	3.00 @ 4.00
Oranges, Mex.....	22.00 @ 25.00
Tahiti.....	10.00 @ 20.00
Cal.....	— @ —
Peaches, box.....	75 @ 1.00
do, basket.....	40 @ 75
Pears, box.....	75 @ 1.75
Pineapples, doz.....	4.00 @ 6.00
Plums, box.....	1.00 @ 1.15
Raspberries.....	8 @ 10
Strawberries, ch'st.....	4.00 @ 5.00
DRIED FRUIT.	
Apples, lb.....	5½ @ 7½
Apricots.....	10 @ 12½
Citron.....	23 @ 24
Dates.....	9 @ 10
Figs, Black.....	4 @ 7
White.....	6 @ 8
Peaches.....	8 @ 10
Pears.....	4 @ 7
Plums.....	3 @ 7
Pitted.....	12½ @ 14
Prunes.....	14 @ 16
Raisins, Cal, bx.....	1.00 @ 1.66
do, Hales.....	1.50 @ 2.00
do, Quarters.....	1.50 @ 2.50
Blowers.....	2.75 @ —
Malaga.....	2.75 @ 3.00
Zante Currants.....	8 @ 10
VEGETABLES.	
Asparagus, box.....	75 @ 1.00
Beets, cts.....	1.00 @ —
Beans, String.....	2 @ 3
Cabbage, 100 lbs.....	50 @ 55
Cauliflower, doz.....	2.50 @ 3.50
Carrots, cts.....	63½ @ 75
Cauliflower, doz.....	50 @ 75
Cucumbers, bx.....	50 @ —
Garlic, New, lb.....	1½ @ 2
Green Peas.....	10 @ 1½
Lettuce, doz.....	10 @ —
Parasels, lb.....	2 @ —
Horseradish.....	7 @ 8
Rhubarb.....	1 @ —
Squash, Marrow fat, tn.....	18.00 @ —
Summer do, bx.....	25 @ 40
Tomato, 30 lbs bx.....	30 @ 40
Turnips, cts.....	1.50 @ —
White.....	50 @ —

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

WEEK ENDING JUNE 18TH.

TRACE AND PAD BUCKLES.—George E. Bales, Seattle, Washington Ter.
BOOK HOLDERS.—James D. Brown, Suisun City, Cal.
TRUSSES.—Duncan Deveron and Herman Lackmann, S. F.
WARDROBES.—Michael Doyle, S. F.
VINEYARD FLOWS.—Milton Ross, San Jose, Cal.
SEED SOWERS.—William A. Horral and Joseph J. Verckler, Chico, Cal.
AMMONIA OR ETHER MACHINES.—Eugene Moreau and Jas. W. Haggerty, S. F.

TRADEMARKS.

CARBONATE OF SODA.—Charles R. Burrage, S. F.
CREAM OF TARTAR.—Charles R. Burrage, S. F.
MEDICINAL COMPOUND.—Charles R. Burrage, S. F.
COAL OIL.—John E. Miles, S. F.

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All lovers of progressive science and mechanical perfection should see it, and every lady in the land should examine and try the "DAVIS VERTICAL FEED" before deciding to purchase an inferior machine, or a single thread playing without a tension.

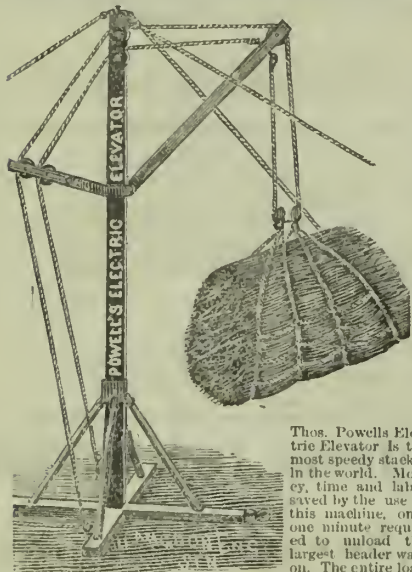
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Self Regulating
WINDMILLS,
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These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in habited boxes. Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

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GENERAL OFFICE AND SUPPLIES, LIVERMORE,
ALAMEDA CO., CAL. Also, Best Feed Mills for sale,
San Francisco Agency, LINFORTH, RICE
& CO., 401 Market Street.

MATTESON & WILLIAMSON'S

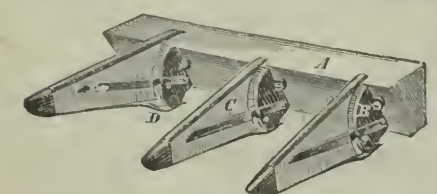


Took the Premium over all at the great plowing Match in Stockton, in 1870. This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over the handle knobs without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

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Adjustable Grain Lifter for Headers.



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HAY PRESSES.

JOHN H. GOVE'S PATENT IMPROVED

Centennial & Eagle Hay Presses,

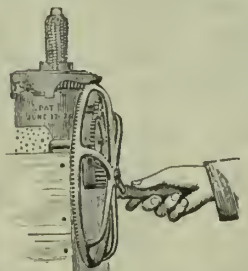
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EUREKA WAREHOUSE, NORTH POINT,

Are the best made, combining Strength, Durability, and Compactness. Send for Circular. Post Office Box, 1122. Also, for sale by

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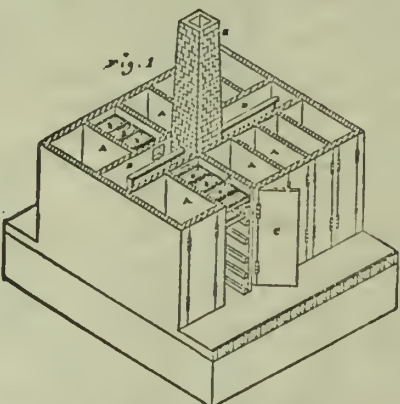
Peerless Corn Sheller.



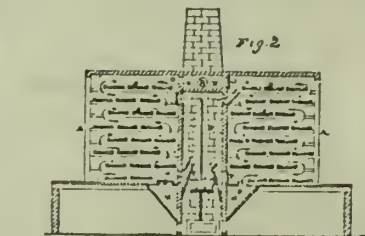
It is so cheap (costing only \$6), that almost any one can afford to buy one. It is so rapid, it will shell almost as fast as a \$40 machine, and seven or eight bushels per hour is not above its capacity. It weighs only 13 pounds and is simple and durable. For particulars, address

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Blowers' Patent Fruit Drier.



Prospective View, Showing Draft Chimney, Furnace and Drying Rooms.



Transverse Section Showing Heating and Drying Chambers and Currents of Heated Air.

The Only Successful Fruit Drier in the World.
Professor D. M. Mefford, inventor of the celebrated Mefford process of drying fruit and vegetables without loss of color or flavor, says of the "Blowers' Drier": "Your Drier is really the only Fruit Drier in the world, and compared with which every drier I have seen (and I have seen them all) is really worthless for successful factory work. If fruit driers wish to make a success of their work they must use your drier." D. M. Mefford, Toledo, Ohio, March 2d, 1878.
For descriptive circulars, address

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(A Preparatory School to the University)

A First-Class Boarding School,

Established in the interests of higher education, and in opposition to the cramming system of small colleges and military academies of the State. The next

Term Will Commence July Twenty-Fourth.

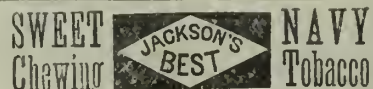
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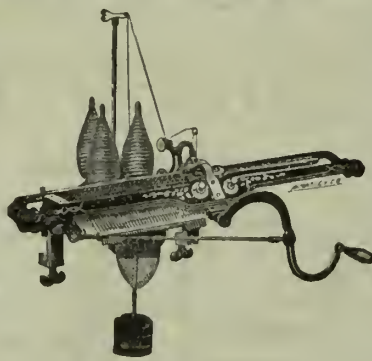
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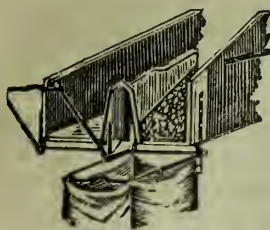
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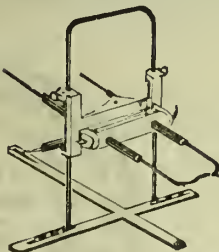
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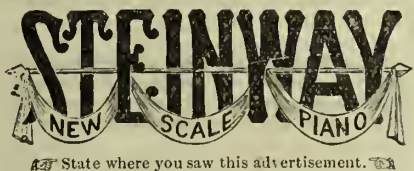
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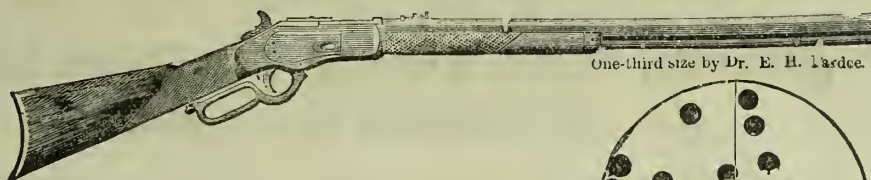
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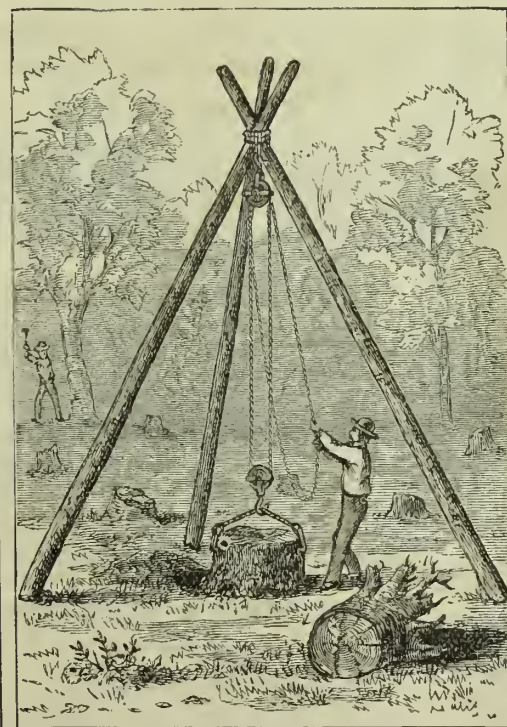
Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

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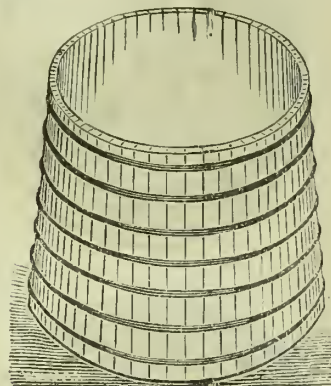
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A thoroughly studied and ably written treatise on this subject by Hon. B. B. Redding, appears complete in the PACIFIC RURAL PRESS for January 26th, and also the MINING AND SCIENTIFIC PRESS. Based upon facts, figures and careful and extensive observations made in various parts of the State on this important subject, it is a volume of reliable information, interesting to every resident of the State. The information is condensed in a paper read before the California Academy of Sciences, and is published in the Press as read before that Society without any alterations or omissions. Extra copies, post-paid, 10 cents. Address DEWEY & CO., Publishers, 202 Sansome Street, San Francisco.

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THOMAS FLINT, President. J. W. FOARD, Manager.
FERD. K. RULE, Secretary.

OFFICE OF

The California Farmers' Mutual FIRE INSURANCE ASSOCIATION.

209 Sansome Street, San Francisco, Cal.

At a meeting of the Board of Directors of the California Farmers' Mutual Fire Insurance Association, held on the 10th day of April, 1878, a resolution was adopted appointing J. W. Foard, Esq., late Insurance Commissioner of the State, General Manager of the business of the Company.
FERD. K. RULE, Sec'y. THOMAS FLINT, President.

OFFICE OF INSURANCE COMMISSIONER,
San Francisco, May 24th, 1878.

I, JOHN C. MAYNARD, hereby certify that I am Insurance Commissioner of the State of California, and have supervision of Insurance business in the State, and as such Commissioner further certify that the California Farmers' Mutual Fire Insurance Association of San Francisco is a corporation properly organized under the laws of this State, and possessed of a paid-up capital of two hundred thousand dollars (\$200,000), equal to gold coin of the United States, is authorized to do business in the State.

And I further certify that upon an examination of the books and papers of the said Company, it is shown to be possessed of good, valid assets, amounting to the sum of three hundred and twenty-six thousand six hundred and seventeen dollars and twenty cents (\$326,617.20); and has outstanding liabilities, as defined by the laws of the State, amounting to one hundred and twenty thousand three hundred and two dollars and thirty-seven cents (\$120,302.37), exclusive of capital stock.

As witness my hand and official seal, the day and year first above written.
[Seal.] [Signed.] J. C. MAYNARD,
Insurance Commissioner.

Presenting the above Certificate of the Insurance Commissioner, the Company would call the attention of the public to the fact that in this, the fourth year of its existence, and after prompt payment of all its losses, amounting in the aggregate to \$110,648, it shows a clear surplus for the benefit of policy holders of \$206,314.83 over and above \$115,721.32, set apart as required by the law, as a re-insurance reserve.

Within the past half year radical changes having been made in the management of the Company's affairs, a continuance of the public patronage hitherto accorded it, is solicited at 209 Sansome Street.

THOMAS FLINT, President. J. W. FOARD, Manager.
FERD. K. RULE, Secretary.

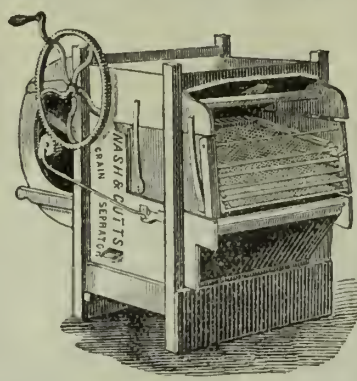
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50 BEST Mixed Cards, with name in case, 13c, or 25c, no two alike, 10c. Outfit 10c. Dowd & Co., Bristol, Ct.

THE BEST IS THE CHEAPEST.

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THREE SIZES—Warranted to Clean from 60 to 200 bushels per hour, perfectly.

PRICES—\$40, \$50 and \$75.

The Nash & Cutts' Machine is the only machine that has taken the First Premium at California State Fairs in 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877.

Nash & Cutts' Machine will thoroughly separate Mustard Seed, Cheat, Barley, Oats, Cracked Wheat, etc., from Wheat in a rapid and satisfactory manner.

No zinc sieves used in the Nash & Cutts' Grain Separator and Fan Mill; therefore we can

Clean Faster, Better, and with Less Work and Trouble.

Than any other machine now in use.

The Nash & Cutts' Machine is the only one that will clean Alfalfa Seed. All we ask of any one in want of a Grain Separator is to give the Nash & Cutts' a trial.

EVERY MACHINE FULLY WARRANTED.

The Nash & Cutts' Machine is for sale by all Agricultural Implement Dealers in California.

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Only manufacturers of the Nash & Cutts' Grain Separator for the Pacific Coast.

THE CAPITAL WOOLEN MILLS,

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San Francisco Savings Union, 532 California street, corner Webb.—For the half year ending with June 30, 1878, a dividend has been declared at the rate of eight (8) per cent per annum on term deposits and six and two-thirds (6 2/3) per cent per annum on ordinary deposits, free of Federal Tax, payable on and after Tuesday, July 16, 1878.

LOVELL WHITE, Cashier.

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PACIFIC RURAL PRESS

Volume XVI.]

SAN FRANCISCO, SATURDAY, JULY 13, 1878.

Number 2.

Burdens of Debtor and Creditor.

We wish every reader of the RURAL PRESS were out of debt, and we have enjoyed the hope that this year's abundant crops would lift the burdens which many of them are carrying. Thus they may do for many, but the losses from overflow, from excessive water in the soil, and last of all, from that savage sapper of strength, the rust, will consign many again into the region of anxious hope for another year's good offices.

We have often deprecated the too prevalent system of store credits which prevails among our farmers. We know that credit is the life of trade; when credit means general confidence in a man's ability to pay. We know also that there are many cases where men are in such desperate straits and so reduced in resources that they would well nigh starve were it not for the country merchant, who carries them over the unproductive months, and yet we fully believe that this reliance upon the country merchant is more prevalent than it ought to be. As a rule, perhaps, our farmers buy too much; they buy what they ought in many cases produce. Our ranches are not self-sustaining to the extent they ought to be and our farmers are not masters of their own living, as many might be, if they would devote more time to diversifying their productions, with a view to furnishing their tables from the field instead of from the grocery. It is this neglect to provide which pinches our farmers harder than anything else. There has been times in some parts of this country when farmers suffered infinitely more from depression of prices than anything which now is known. When eggs, for instance, sold for three cents a dozen, and a wagon load of wheat would only bring a few dollars, and that payable in "white dog" and "blue pup," depreciated State currency, which was only worth a few cents on the dollar. When all a farmer could sell would only bring money enough to pay taxes and to buy a few groceries and new shoes all around for his family. And yet, dark as were these days in the prairie States, the farmers lived well. Clad in homespun, and with tables furnished with home-grown pork products, beef, milk, poultry, eggs and vegetables, the farmer and his family were well nourished, and children raised to settle and develop the farther west. From such surroundings, many of us have come, and yet we have forgotten the lessons of home supply for simple tastes, economy and resulting independence which we learned in childhood. We do not mean to say that the times of depressed prices and depreciated currencies were desirable. Far from it; but if the policy of home support, which was then an absolute necessity, could be more generally grafted upon our more generous surroundings, does it not appear that so much heavier would be the farmer's purse at the end of the year, because some of the most grievous drains upon it would be closed up. The greater would be the saving, because so much less the spending, and in good years there would be handsome surpluses for home and farm improvement, and in bad years there would be at least sufficient to eat and to wear without mounting the back of the country merchant. He will carry you in a bad year, but when the tide of prosperity returns, it will take nearly all you can reap to pay for this carriage.

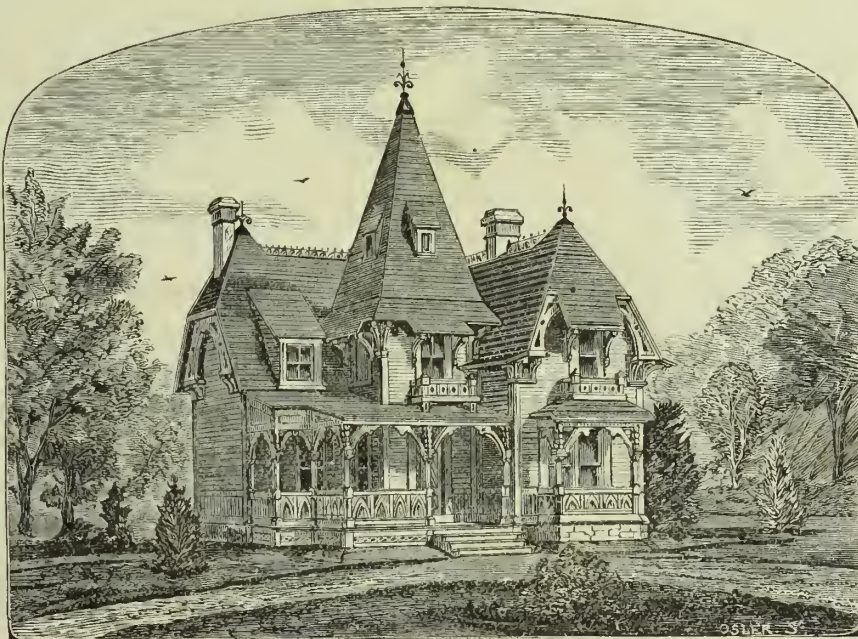
These remarks are all trite. They have been made, in substance, many times, and yet they are true and prove true in the experience of many of our provident farmers, who, by their enterprise in diversifying their productions and fitting their land for this diversification, have made themselves independent, free from debt and filled their homes with plenty and comforts. They have had full larders, even when their pockets were lean of coin, because staple crops had failed. This is the surety of success and safety in farming operations everywhere. First, when the farm is yours in fee simple, make it supply your daily wants as far as possible. The other method is to neglect this and risk all on the staple to be sold. When this is the plan adopted, the first unfavorable year

claps a mortgage on the farm to pay for living expenses, and the interest, growing faster than future crops, soon puts the land in the hands of the bank or the merchant. This sequence of affairs has too often prevailed.

We do not remember to have seen the merchant's side of this question stated before and yet it seems that he would prefer a different order of affairs, which would give him quicker returns even at the cost of reduced sales. The *Pacific Grocer*, which is established as the organ of the country merchants, recently made these remarks: "To the merchant, the anticipated system of indebtedness, though seemingly favorable at times, turns out the reverse. The

Design for Gothic Cottage.

There is now great demand among house builders for departures from the old log cabin or parallelogram model of a dwelling, and features are borrowed from the architecture of all times and lands to secure the coveted diversity. Although the result secured is often very tasteful and beautiful, there are many instances in which the builder has made a jumbled mess of his design and his work offends all correct tastes. We have seen linkings together of different styles of architecture which are almost

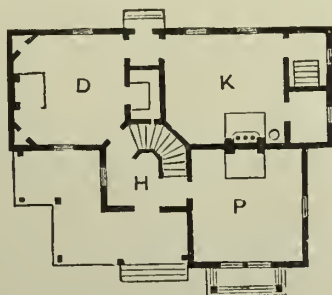


DESIGN FOR COTTAGE IN GOTHIC STYLE.

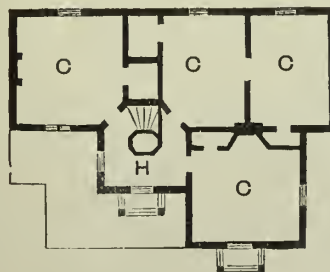
farmer, if continually in debt, cannot rest or improve his land. Cropped continuously, the yield and quality of the grain decreases. With no hope of getting permanently out of debt, the farmer often loses his ambition. Seeing no prospect of relief, he often becomes reckless, and, in many instances, when possible, evades his liabilities to the merchant who has trusted him. High prices will not justify hazardous risks nor will poor farmers make a prosperous trade. It is time our people should base their expenditures upon what they have in hand, and not what they hope to get, if a favorable season

as out of place as would be a sawed bracket on the Parthenon. We have seen dwellings made up of a mixture of light and heavy orders; as ridiculous as light basket wagons hitched to an elephant.

It is commendable to diversify our styles of buildings, but it should always be done with due regard for two things, first the symmetry of the design, or the harmony of all parts with each other; second, the concord of the whole structure with the surroundings. A picturesque site calls for a building which shall be in sympathy with our character. An ornamental cot-



FIRST FLOOR.



SECOND FLOOR.

to cottage designs in several different ways by Messrs. Hobbs & Sons, and in the hands of skillful designers it gives opportunity mould and modify according to the demands of individual needs, and still retain its truth.

The cottage shown in the engraving is frame and the roof is of slate or shingles as desired. The estimated cost is in the neighborhood of \$3,500. The following explains the lettering on the floor plans and gives the dimensions of the rooms:

First floor—H. hall, 10 by 10 feet; P. parlor, 14 by 14 feet; D. dining room, 14 by 14 feet; K. kitchen, 14 by 15 feet. Pantries and closets are also shown on the diagram.

Second floor—C. chamber over parlor, 12 by 14 feet; C. chamber over dining room, 14 by 14 feet; C. C. chambers over kitchen, 10 by 14 feet. Closets are also shown.

FRUIT TREE FRAUDS IN GERMANY.—It seems that this country is not alone in the evil of irresponsible and unscrupulous vendors of worthless trees and plants. We have already commented upon the evil use which is made of colored plates on this coast. It seems that the business as practiced on the continent is not so glaring a fraud in its method, but no less evil in its results. We read in the *London Farmer* that some of the Continental agricultural journals are doing their best to put a stop to a form of swindle that is being carried on with considerable success in various towns in Germany. Certain astute gentlemen go about from town to town, hiring shops for short terms in the most frequent thoroughfares. In the front windows are displayed some genuine specimens of extraordinarily fine fruits and plants, purporting to have been raised from seeds and cuttings such as are to be sold within. Catalogues are liberally distributed, containing full particulars of cherries that run only twelve to the pound, raspberries as big as hen's eggs, Jerusalem fig trees bearing four crops a year, everlasting asparagus, and similar tempting wares. Frankfurt-on-the-Main was the last place these gentry honored with a visit, and they drove a roaring trade for a considerable time before their impostures were detected.

AGED OLIVE TREES.—The advocacy of the olive as a fruit worthy the wide attention of our orchard planters is proceeding. In the June number of the *Southern California Horticulturist*, Mr. Kimball, of San Diego, gives some entertaining figures of the opportunity for profit in olive growing. The ultimate results of Mr. Elwood Cooper's experiments in olive oil will be looked for with interest by many. It may be interesting, when we are discussing the olive, to remember that the trees we plant may carry our fame far down into the centuries. The last issue of the *London Farmer* mentions several historic trees. In the neighborhood of Beaulieu may be seen an olive tree which as far back as 1515 was already noted for its extreme age. Its trunk measures 12½ meters in circumference at the base, and more than 6½ meters at a height of 40 inches above the ground. This tree, called "Pignole," is the only one that survived the terrible hurricane of 1516, since which time it has yielded on the average about a hundred kilogrammes of oil a year, and sometimes, in good seasons, as much as 150 kilogrammes. Still more celebrated are some trees growing in the Garden of Olives at Jerusalem. They are eight in number, measure about six meters in circumference, and according to Bove must be at least 20 centuries old. And on the banks of Lake Trasimeno are other veterans, some of which may doubtless have witnessed the expedition of Hannibal.

THE MECHANICS' INSTITUTE FAIR.—A meeting of the managers of the Mechanics' fair was held on Tuesday evening, July 9th, and the date of the opening of the fair was fixed for August 13th. The Superintendent's report stated that arrangements for the exhibition were progressing satisfactorily. Two hundred and fifty applications for space had already been received. The enterprise will be taken up with full zeal and activity on the part of the managers, and a creditable exhibition of industrial interests will doubtless be secured. It is time that all who have good things to display should begin at once to prepare for the fair. Let them apply for space early and prepare their exhibits in attractive form.



CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds

Wheat and Cheat.

EDITORS PRESS:—I have thought it best to await the forthcoming of all the arguments which the believers in the transformation of wheat into cheat could bring forward, before saying anything more on the subject. I think it may be fairly presumed that the statements of Messrs. Alexander and Crabtree, in your previous issues, embrace about all that can be adduced in favor of that improbable theory, except in so far that experiments and conclusions equally fallacious have been over and again formed the subject of discussion in agricultural circles. Only in one respect is there anything novel in the present case; the old-time assertions made in regard to chess, properly so-called, are now repeated with respect to another plant, differing from chess as widely as it does from wheat itself; namely, the well-known old-world weed, the bearded or poison dandelion. It seems admitted on all hands, that the case of both kinds of "cheat" is equally cogent.

To those accustomed to the rigorous methods of scientific reasoning, which have brought the magnificent achievements of modern science out of the quagmire of mingled dogmatism, superstition and superficial observation of past centuries, the simple fact above recited bears the refutation of the cheat-theory on its face. If the transformation of wheat into one other kind is improbable, because of the total absence of any analogous case authenticated by accurate observation, the improbability becomes overwhelming when it is claimed that in California a totally different plant results from the action of the same circumstances which in the Atlantic States causes the production of chess, properly so-called.

Let us formulate the propositions to which those who maintain the transformation of wheat into cheat and dandelion must be prepared to subscribe if they would be consistent: (1), If wheat is transformed into chess, then upon the same evidence (2), barley is transformed into chess, (3), oats is transformed into chess, (4), rye is transformed into chess, (5), half a dozen of the most valuable forage grasses are transformed into chess, (6), chess itself is not transformable, not even into dandelion; but California has the special privilege of having the dandelion figure in all these transformations, in the place of the true chess. Or, to put it all into one proposition: chess and dandelion each may be formed out of many of the cultivated grasses, according to season and climate. But each of these two changelings comes true as steel to its own seed forevermore!

Now, these are stunning revelations in the field of vegetable physiology. In all his laborious researches on the origin of species, Mr. Darwin has not been able to unearth such a bonanza as this to show the mutability of different plants into one another. Why has he, and so many others following in his footsteps, overlooked or neglected such a wonderful chance to make a sweeping point?

Simply for the reason, that among the many thousands of carefully conducted culture experiments, made under circumstances infinitely varied and rigorously controlled, by men who devoted their lives to such researches, not a single one gave the slightest support to the idea that such transformations as are claimed, take place at all; but show that all seeds come true within very narrow limits of variation, far within the wide scope by which wheat is distinct from chess or dandelion.

As for the evidence adduced to prove the transformation claimed, a cursory glance shows that all the experiments were radically defective in not proving the absence of chess or cheat seed from the soil used. If in the case adduced by Mr. Alexander, "all parties were satisfied that there was no foul seed of any kind in it," that fact only shows that well meaning and intelligent gentlemen may commit very grave mistakes in being too easily satisfied of things of which they could not possibly have any definite knowledge. It is but fair to them to suppose that if they had been on a jury in a murder trial in which a man's life depended on the presence or absence of such proof, they would have been more careful. It is with just such rigorous care that every scientific investigator surrounds his experiments; and any failure to do so renders his work valueless in the eyes of his fellow investigators. Experimenters must not, at the outset, beg the main question; and this is precisely what was done by Mr. Alexander. Nor do I think it requires a "professor" to tell Mr. Crabtree what became of his wheat on the overflowed ground, and where the cheat came from. The wheat simply rotted; and any seed whatsoever growing on the surface of any valley anywhere, may be looked for on any overflowed spot below. However, it is perfectly easy too for any one to ask a thousand questions of detail regarding the causes of his mistaken conclusions, which no one but himself can answer.

Still, as regards the presence in the ground of seeds never suspected, which lie dormant for years until a favorable opportunity for growth

presents itself, there is such abundant experience, that, laying argument aside, I may as well ask Mr. Alexander and those who share his belief, a few questions in return.

What of the well-known "second growths" which, in the experience of every country, follow the destruction of the natural plant-growth as regularly and naturally as if the seeds had been sown? Does the "Loblolly pine" for instance, proceed from the stunting of the natural oak growth that preceded it, by "transformation?"

What of white clover, which mysteriously "comes in" wherever certain conditions of soil are realized by improvement, in remote districts where it was never known before?

What of the "fire-weed" of Europe and the East (at least I have not as yet seen it in California) which springs up wherever a pile of brush has been burnt, especially in new clearings? Was that formed out of the fire, or transformed out of some native plant—a sort of universal changeling, like "cheat?"

What of the regulation persimmon and sassafras, sheep fescue and "mayweed" or "dog fennel," that take possession of every old field turned out, south of the Ohio river; even in the howling wilderness, scores of miles from any other place where they occur?

What, finally (to come nearer home), of 20 or more species of well-known old-world weeds, which have spread over California like wildfire, within a few years, to the sorrow and confusion of farmers?

We know that winds, birds, streams, the feet and hair of stock of all kinds, as well as their excrements, the feet, clothes, pockets, packages and vehicles of man, the seeds he sows purposely, and a hundred other things, are potent and uncontrollable agencies in the distribution of species of plants, and especially of those which, being hardy, introduce themselves in spite of man's efforts to subdue them; and these he calls weeds. We also know that seeds differ widely in the facility with which they sprout, and the time during which they preserve their vitality. The seed of dandelion and chess may thus accumulate in the ground for several years, and a few only find an opportunity to sprout. The occurrence of a prolonged wet season brings them all to the front, and then the race is to the swift and the strong. If Mr. Alexander doubts that our cultivated grains are "pampered," let him ask himself whether he ever saw one of them assuming the part of a troublesome weed! But if he wishes to satisfy himself of the existence of thousands of weed seeds in any virgin soil he may gather on hillside or bottom within a score of miles of civilization, I will be glad to afford him the opportunity in my laboratory, where every mechanical soil analysis requires a special operation to get rid of the multifarious collection of seeds separated in the operation of washing. I will take pains in one such case to gather them together and count their kinds and numbers, and give your readers the benefit of the result.

But in a case like this it is quite unnecessary to argue about "opinions," any one can test the matter for himself, not in the loose way often tried, but thus: *Boil any tolerably light soil for at least two hours, with enough water and stirring to make a thin paste. Dry this down and give it tilth by working, place in clean, smooth boxes or pots covered with glass or mosquito nettings, and sow a definite number of seeds, marking the place of each. Then turn on your wet and dry seasons, and be sure that no sympathizing neighbor plays you a trick. If with these precautions, strictly observed, you ever get a spear of cheat out of anything but cheat seed, the world will hail you as a discoverer greater than Morse or Edison.*

E. W. HILGARD.

University of Cal., July 4th, 1878.

Cheat for Hay.

EDITORS PRESS:—I have seen a great deal of discussion in your valuable paper on the subject of wheat turning to cheat, which I am satisfied it will do. I have found a number of bunches of cheat with wheat husks (?) on the roots, and others with husks of barley; and as for cheat growing from cheat seed, that I have demonstrated to a certainty, for I have sowed from 10 to 25 acres every year for years. I think it makes the best of hay when properly taken care of, and makes a large yield per acre. It wants to be sowed on the wettest ground you have; ground that wheat will drown out on. It wants to be sowed in the fall, before any rains, and it takes a start before the weeds and chokes out everything else. As for making hay of it, it needs to be cut when in the thick milk, raked in six hours after cutting, and shocked as soon as soon as possible and hauled into the stack or barn as soon after as convenient, as it will dry out very fast when in the field.

E. T. WALL.

Santa Rosa, Cal.

COAL.—Anthracite contains a small portion of volatile matter, its component parts being carbon, oxygen, hydrogen and nitrogen—the hydrogen being either combined with the oxygen to form water, or with a small portion of carbon to form carbureted hydrogen, which exists in a gaseous state in the pores of the coal. In bituminous coal, the hydrogen is combined with a larger proportion of oxygen and nitrogen, the mechanical difference being that the bituminous and free-burning coals, in particular, melt by heat when the bitumen reaches the boiling point—whereas anthracite is not fusible, nor will it change its form until it is exposed to a much higher temperature.

THE STABLE.

Breeding Horses in California.—No. 6.

[Written for the Press by JOSEPH CAIRN SIMPSON.]

Recent names in a pedigree permit of closer scrutiny on the part of the breeder, the sire and dam, of course, being under his observation and the points of each where they can be compared. As he "harks back," a few generations bring him to where he is entirely dependent on other sources for his information. Scarcely any two men look at a horse alike. One will find points to condemn where the other would praise. A majority are prone to disparage and appear to think that they will not be considered judges unless they criticize adversely. Those people often make themselves ridiculous by assailing when there is no foundation, and should they attempt praise, are as likely to blunder. If observers looking at the same animal are prone to disagree, how is it to be expected that descriptions made years, in some cases centuries, ago are to be relied upon, or what are the benefits to be derived from the consideration of those horses of the olden time? This question is pertinent, and I am not surprised that many think the study a waste of time. But there are certain elements which are precluded in breeding the thoroughbred horse which force themselves upon the notice of those who are anxious to get more than a superficial acquaintance, and among those is the origin of the race.

I do not think it requires further proof, in these essays, to show that the Spanish, Turk and Barb were the most used than to give a few of the pedigrees of the celebrated horses which descended from them. That these three families were superior to the others in form, in size, speed and endurance, is established on the authority of the author from whom I have quoted, and so competent a judge, his testimony must have superior weight. In alluding to the diversity of opinion regarding an animal which is presented to the view, it does not entirely invalidate the evidence of a proficient when recounting the characteristics of the various breeds; but, fortunately, there is a superior test to the opinion of any man—actual performances on the course. To run fast, to stay a distance, to carry weight while going at a great rate of speed and to keep up that speed while encumbered, are evidences of qualities which are the most desirable for other purposes. Particular lines of thoroughbreds have proved to possess these attributes beyond the general characteristics of the race, and these lines are the preponderating strains of the best of today.

One hundred years ago, the most celebrated trio in the pedigrees of the period were Matchem, Herod and Eclipse, and the blood of the best of the present time is a combination principally derived from these sources. Matchem was foaled in 1748, Herod in 1758, Eclipse in 1764. Matchem was a grandson of the Godolphin Barb, on the side of his sire, Cade, and his dam was a granddaughter of the Byerly Turk. In his pedigree are found St. Victor's Barb, Acaster Turk, D'Arcy's, Yellow Turk, Morocco Barb, Curwen's Bay Barb, Selahy Turk, White-Legged Barb, Place's White Turk. Some of these occurring twice with several mares of Turkish and Barb blood. The Arab blood is comparatively scarce. Herod was by a son of Partner, and Partner by a son of the Byerly Turk, while the dam of Partner was by Curwen's Bay Barb. Spanker occurs twice in the pedigree of Herod, and Spanker was by D'Arcy's Yellow Turk, his dam by Morocco Barb. There is more Arabian blood in Herod than Matchem, still the Turk predominates and inbreeding is more prevalent. As an instance, Flying Childers, the grandsire of the dam of Herod, was by the Darley Arab, his dam, Betty Leedes, by Careless, Careless by Spanker, out of a Barb mare; Betty Leedes' grandam was by Spanker, her dam the dam of her sire.

Though Eclipse was in direct descent from a brother to Childers, and therefore credited to the Darley Arab, there was far more of the Turk and Barb in his composition. The name of Hautboy is found in his pedigree five times, and Hautboy was by the White D'Arcy Turk, out of a royal mare. As has been stated previously the royal mares were not Arabs, being imported from Tangiers, and there is little, if any, question that they were true Barbs. But the claim being established that the first and best of the old time thoroughbreds had little Arabian blood, and the stud books showing that those of the present are mainly from these, the further consideration of ancient genealogies will be deferred until the series of tabular pedigrees are given. Of the stallions imported into the United States, 36 were descended from the Burton Barb mare, 33 from royal mares, while it is difficult to find one which traces directly to an Arab mare. Messenger, the great patriarch of all, when racers and trotters are both taken into consideration, his sixth dam was by the Duke of Newcastle's Turk, seventh dam by the Byerly Turk, eighth dam by Taffolet Barb, ninth dam by Place's White Turk, his tenth dam, Natural Barb mare.

The Mollie McCarthy-Ten Broeck Race.

NOTE.—The lapse in these articles has been caused by the author having been unusually

busy, and the subject, dry as it is, required close study and laborious researches. In the meantime a California-bred race horse has met with defeat in the East, and a majority look at it in the light of an ignominious failure. Those who will take more time and the pains to weigh the circumstances attending the contest, will obtain a better and truer idea, and the estimate of these, who are the best judges of the capacities of horses, will be, that Mollie McCarthy showed a superiority to Ten Broeck in the quality of speed, while the conditions were such as to preclude the test of endurance being made between the two. Speed is the first attribute of a race horse and the main element of superiority. When Col. R. M. Johnson, of Virginia, was questioned on the subject and asked what he considered to be the most desirable thing in a racer, answered, "speed." "What next?" "More speed," he replied. "And the next?" "Still more speed" was the emphatic rejoinder. This, of course, was with the understanding that the animal was properly bred, which would alone ensure endurance at a high rate of speed.

Every account from Louisville agrees that so long as Mollie could run, Ten Broeck could not overtake her, and only when the hot day, the heavy track, and the fast pace of the first mile, had completely prostrated her, was the Kentucky champion able to leave her behind. Under the disadvantages attending the long journey, the change of climate and water, to display this superiority was a high encomium on the country where she was bred. The manner in which the race was run was sure to end in the discomfiture of which ever "cut out the work." It was an error of judgment consequent on a false opinion of what would be the result.

There is not room in this paper to enter into an elaborate analysis of the race. It will come in appropriately in the further consideration of "Breeding Horses in California," and I have every confidence in my ability to prove that the "mare was the better horse" although she met with defeat.

FLORICULTURE.

Calladiums—The Cacalia.

EDITORS PRESS:—The calladium is one of the handsomest of the ornamental leafed plants; their large and elegant foliage making them particularly desirable plants in sub-tropical gardening, which style is now so very fashionable (for we have fashions in gardening, but not quite so exacting or changable as fashions in dress) in the embellishment of the garden or pleasure grounds.

There are numerous varieties of the calladium, many of which produce a wonderful leaf growth in both size and markings. The foliage of the variety known as *C. esculentum* attains an immense size, frequently measuring two or three feet from tip to stem and one to two feet in width, they are shield shape, of a bright, light green color, beautifully veined and marbled with rich dark green.

The root of the calladium is of the form known in botanical terms as rhizomes, (large, fleshy, bulb-like roots). Roots planted in the spring will make a good growth in the summer and fall; in climates liable to frost or long wet seasons, the roots should be taken up in the fall kept in sand, in a warm dry place, like the tubers of the dahlia, during the winter. In many sections of the State it will not be necessary to remove the roots, and where this can be avoided much finer plants will be the result every succeeding year, until a removal is compelled from a too thick growth, probably in four or five seasons.

The calladium is of the easiest culture, growing freely in any good garden soil, but luxuriating in a rich light loam. They delight in heat and moisture, but must be planted in partial shade. In localities where the seasons are short, or pretty well north, it will be found most satisfactory to start the roots in the house a few weeks previous to the time for planting in the garden, as in this way a larger and more magnificent growth is obtained.

In many of the fancy leafed varieties of the calladiums the leaf markings are fantastic and brilliant, combining the richest rose color with the delicate green and purest white, or brilliant carmine and dark green, in a way which only Dame Nature could conceive. As a rule the fancy varieties are more tender and better adapted for pot culture than other varieties.

The Cacalia.

The cacalia, or tassel flower, is a very pretty little annual, easy of culture, and for cutting surpasses many of the more tender and expensive varieties of flowers. The bright tassels of the *Cacalia coccinea*, a bright scarlet variety, mixed with pretty grasses, with a few sprays of sweet alyssum and a head or two of *Ageratum Mexicanum*, is beautiful beyond description, and fit to ornament any ladies' boudoir. It will grow in almost any soil. We always have in our grounds a second crop from self-sown seed, not infrequently outside the bed among the gravel. There are two varieties: *C. coccinea*, the scarlet variety, and *C. coccinea flore lutea*, a bright yellow; the plants of each variety can be very easily distinguished when young, as the underside of the leaf of the scarlet variety is light

crimson, while the other is green. Those who have never tried this little annual will not be disappointed if they will give it a trial. In California, for an early supply, sow seed in the fall, again in the spring for a summer supply; from these you will generally have plenty of self-sown plants, so that they may be had at any and all times.

Answers to Inquiries.

TUBEROSE IN POTS.—"Can I grow the tuberose in pots so as to be satisfactory?"—J. W. C.

Yes; the tuberose may be cultivated in pots, and will bloom just as satisfactory as if planted in the garden. There is also an advantage in pot culture when planted late in spring, for the pots can be taken in in the fall, permitting the bulbs to complete their blooming period in the house. By all means grow them in pots if you cannot give garden culture. There is no finer plant for fall blooming; its pure, white cups are very fragrant. Get the Dwarf Pearl variety for pot culture, if possible.

DAHLIAS.—"Where shall I plant my dahlias, in full sun or partial shade?"—A. M. T.

Dahlias should be planted in a shady locality, unless you can water them every day. If planted in too dry a place, the blossoms are scarcely ever fully developed, unless the plants are copiously watered every day in the dry season. Plant your dahlias on the north side of your house, or where they will get the morning sun and be shielded from the hot rays at noon. Keep the soil damp around the roots, and you will have no trouble in securing full flowers and plenty of them. WM. C. L. DREW.

El Dorado, Cal.

SHEEP AND WOOL.

The Wool Trade of the Half-Year.

The wool report of E. Grisar & Co., of San Francisco, for the six months ending June 30th, 1878, is as follows:

At the opening of the season the prospect for our spring clip seemed rather poor, as the depression existing in the Eastern markets, the reduced consumption and the daily declining prices did not warrant any improvement on the opening prices of the previous year, but in this the California wool growers have been agreeably disappointed; thanks to Eastern buyers, who appeared in greater numbers than ever before.

On account of the long-continued rains, which greatly delayed shearing, wools arrived later than usual. Receipts also were small, owing to a decrease of about 40% in the production, in consequence of the heavy mortality among sheep, caused either by starvation or exhaustion brought about by the stormy weather during the early season. It is, however, in the San Joaquin valley and in the south that the greatest losses have occurred. In the north, the loss though trivial in comparison with that of the above districts, was greater than anticipated. Another cause of the decline in the production may be attributed to the fact that on account of the scarcity of feed and stormy weather during the greater part of the winter, fleeces were much smaller than in former years, especially from those sheep affected with scab.

The Eastern buyers having all arrived here together, and every one being naturally anxious to send forward a trial shipment, a good demand sprang up at once and prices opened fully 10% higher than had been anticipated. This active demand continued till most of the Eastern buyers had left. Manufacturers have bought freely and heavily, having taken a larger proportion of the clip than usual. Dealers have operated with caution; none of them have bought largely, but as they were numerous, their aggregate purchases were considerable.

Towards the end of May, as the number of Eastern buyers diminished, prices declined somewhat. To-day they are lower than at this time last year, but it must be borne in mind that at that time there had been a rapid and decided advance in prices.

The condition of the clip has been unsatisfactory. Owing to rain, while shearing, considerable wet and damaged wool was received. In the north, especially, the clips contained a great deal of scabby wool, produced by lack of feed and continued wet weather, which prevented the usual dipping of the sheep to prevent scab.

There was, on the whole, more long wool than expected, and it was of stronger fiber, showing that there were some flocks which had not suffered.

As an average, the wools were brighter than last year and more nearly resemble those of 1876. The staple was better than anticipated. Southern wools were remarkable in that respect, as well as in condition, those shorn early in the season showing very little burs and seeds.

Receipts from the extreme north are more greasy, and of heavier condition than last year, but so far contain less seeds. From other sections the shrinkage have been lighter than average, after tags had been removed, as it is generally the case, after wet winters, that the wools contain more tags and locks than in dry ones.

Opening sales for average stapled wools in good condition were 19 to 20c., and prices have ranged from 17 to 22c., according to condition and style.

Long stapled wools in fair condition brought 20 to 21c., but afterwards declined to 17 to 18c. Long stapled fine wools with burs and in

superior condition, for this condition realized 20 to 21c. Good stapled lots brought 19 to 20c.; but towards the end of the season receded to 17 to 18c.

Northern wools opened at 24 to 25c., and for some parcels in choice condition 27c. was paid, but there has since been a decline of 2c per lb. During the last month large sales of good Northern have been made at 23c., while choice brought 25c.

Less Northern wool has this year been shipped direct from this country and the receipt of this staple has accordingly increased in our market.

The demand as heretofore has been for fine wools, and medium grades have been neglected.

Oregon wools have been received in small amounts, and the market for this class has scarcely opened. Arrivals are almost altogether from eastern Oregon. So far the condition and appearance are decidedly inferior to last year's clip. The shrinkage is heavier and the wools contain more alkali and are frowy in their appearance. Selections of Eastern Oregon have been sold at 17 to 18c., but it would be difficult to-day to place any large amount at these rates. No sales of Valley have been made and quotations are nominal. A large increase in the production of Oregon is expected this year.

Present prospects are favorable to the fall production, and we may expect an average clip. It promises to be of good staple as sheep have had plenty of feed. Yet on account of the abundant vegetation there will probably be a great deal of very seedy and burry wool, as late shearing of spring, especially from the south, have already given indications of this fact.

We expect less lamb wool than in former years, as in consequence of the severe weather during the lambing season the mortality among the newly born lambs has been very great. This fact does not promise well for a large increase in next year's spring clip.

Several years must pass before the wool production of this State will equal that of 1877, and as on some lands it is more profitable to raise grain than wool at present, it is doubtful if the production will ever reach that of 1877, or will be maintained at that amount for any length of time.

The statistical position of the half-year's trade is given as follows:

Stock, January 1st, 1878, lbs.	2,500,000
Receipts.....	17,661,900
Shipped elsewhere.....	1,181,000

Product.....	18,842,900—18,842,900
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Total California supply.....	21,342,900
Received from Oregon.....	740,300
Received foreign.....	323,700

Total supply to June 30th.....	22,406,900
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From this supply we have shipped as follows:

By sea from San Francisco, lbs.	2,686,000
Overland from San Francisco.....	15,290,100
Overland from the Interior.....	1,181,000

Total exports.....	19,163,100
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The difference has been absorbed by the local mills or remains as stock on hand. The quantity sent away is 8,400,000 lbs less than for the same time last year and nearly 3,000,000 lbs less than in 1876.

THE VINEYARD.

Shipping Grapes Eastward.

In answer to inquiries addressed to them, Messrs. Davis & Sutton, of New York, who have handled a great part of the California grapes shipped to that city, make the following remarks on packing for eastern shipment:

During the last season we had quite a number of consignments of grapes sent out in refrigerator cars, and when pains were taken in putting up large and choice grapes they paid well. We had some small inferior fruit packed in crates and the top of them covered with green leaves, which sweated the grapes and rotted them. And of course, no pains being taken to even have a strong package to hold the grapes when packed in the car, on their arrival here the crates were in a wrecked condition. This occurred in two instances, and the result was unprofitable to the shipper. An open crate, with four or six trays, weighing five pounds to each tray, when made strong has proved the best way of packing them. And do not put anything over them. Our Eastern people always expect to get large and handsome fruit from California, and if you want to get good prices, select the largest and the best to send East, as the freights are high, and unless the fruit is fine we cannot get high prices for it. Another point you want to remember which often occurs in putting up a car of fruit. After packing about two-thirds of a car you find you have not got enough to fill it, and unless you put in some you did not intend to send, as it is poor, and rather than take pains to get better, you send it forward. Now that is a great mistake, as you are paying freight on an article that will reduce the profit on your good fruit, and often reduce the entire margin on a car-load.

Strict attention should be given to selecting and packing the grapes. Do not leave it to your men, who do not understand the importance of such care, to insure its safe arrival in the far off market. If you send by a refrigerator car, you should see that the ice is put in and the car chilled before the fruit is put in. And do not wait to fill your car with fruit and let it

stand in a hot boiling sun five or six hours before you put ice into it.

As to the best varieties to send, the Muscat is the best white; the Tokay is the best of the colored; while Black Morocco, Black Prince, Purple Damascus and Emperor sell very well. In filling a car it is much better to put in a number of varieties if possible, as it helps to sell them quicker. An assorted car-load, even if you have some other choice fruit, that will keep as well as the grapes—plums and pears, for instance—is desirable and commands good prices.

In regard to prices, if the fruit came in good order and large berries, we sold Tokays as high as \$6 per 30 pound crate: That is an extreme price, however; but it is safe to put the range from \$4 to \$5 for Tokays, Morocco and Prince, and for Muscats at \$3 to \$4, if in prime order, but they are not so good keepers as the colored grapes. We had a White Malaga that transported better, but nothing like as good a grape.

The demand for plums of large size is very great, and the price ranges from \$4 to \$5 for 20 pound boxes. In years the late varieties are more profitable, as they can be sent by freight at a much less expense.

THE DAIRY.

Pure Milk by the "French Method."

In the "Home and Society" department of *Scribner* for July, Joel Benton describes a new experiment of a dairyman, which may be suggestive to some of our milk producers who take part in supplying our cities. The following is the way the milk comes to market:

These glass bottles, which are sent from Sweetclover farm, in Sharon, Conn., and from nowhere else in the world, are made of beautiful clear glass, and, though of daintier proportions, resemble somewhat in shape the large champagne bottles. They are supplied with a wired rubber cork, similar to that which is used for sarsaparilla and beer bottles, and on the side of the flange of the wire, which is to be raised before the cork can be opened, a paper label is pasted overlapping the wire on the glass neck, whereon is printed the day and date on which the bottle was filled. On the base of the bottle is a general label, giving the advertisement of the farm on which the method originated, and a little piece of information of which we shall presently speak. When 20 of these bottles are filled they are put into a box just large enough to hold them, separated from each other by a rack partition.

It is easy to see that milk put up in this way says to the purchaser at once, and unmistakably: "I am 'the genuine article.'" For it would be utterly impracticable to try to tamper with it. The label, which cannot be broken without detection, gives to the buyer the correct history of the contents of every bottle; and when he draws the cork, he knows that the grass his milk was secreted from was cropped the day before on the slopes of lovely pastures in Litchfield county, Conn. There is no fear of chalk, of chemicals or of water. It is the same fluid you find in a pail as it comes from the country barn.

A sentence printed on the bottles tells us that the "bottling of milk from one cow" is a specialty; and to young children and invalids this news becomes a pleasant proclamation. For ordinary use the combination of the milk of 20 to 100 cows suffices, if the dairy be well kept; but, under special circumstances, it is desirable and in the case of delicate infants may save life to have the milk which is used drawn regularly from one cow. When the bottles discriminate in this way an extra label is used to designate "Cow 25" or "Cow 34," and so on.

PERFECTION OF FILTH IN THE DAIRY.—Hon. Harris Lewis, of Frankfort, is reported to have said that a filthy man, with filthy hands, milking a filthy cow, in a filthy stable, into a filthy pail, is the perfection of filth! It may be the perfection of it, as far as these operations go, but it is not the completion of filth. The milk must first go through the usual processes and be strained by a filthy milkmaid or milkman, through a filthy strainer, into a filthy receptacle, sitting in a filthy dairy house, with filthy surroundings and reeking with a filthy atmosphere; then skim it with a filthy skimmer, into a filthy churn, churn it with a filthy dog, in a filthy place, take the butter out with a filthy ladle into a filthy bowl, wash it with filthy water, salt it with filthy salt, pack it in a filthy tub and store it in a filthy place. Then let it be sold by a filthy dairyman to a filthy dealer, who disposes of it to a filthy retailer, who keeps a filthy stall or grocery, dips it out with a filthy paddle, into a sheet of filthy paper or a filthy dish, weighs it on filthy scales and delivers it by a filthy boy to a filthy patron, and the filthy picture can be completed by a filthy imagination!

GUERNSEY BUTTER.—Geo. E. Waring, Jr., thus describes the Guernsey mode of butter making, which, in many ways, will run counter to the theories of our best butter makers: "In Guernsey the milk is never skimmed. It stands in large crocks, or stone jars similar to the oil jars of Ali Baba, until the cream has all risen and until the milk has become thick. It is then poured into an enormous churn and churned by hand, with a common up-and-down dasher, until the butter comes, often four hours. The churning is usually done twice a week,

but the cream is far from maintaining a good appearance to the end of the time. In some of the older settings, in the only dairy which I had an opportunity of examining, the cream was wrinkled like a raisin and covered with mold. The dairymen said they did not like to see it so far gone as that, that it would sometimes get moldy, but that it made no difference to the butter. Probably the volume of milk is sufficient to wash off any impurities; certainly the butter of this dairy gave no evidence of any fault in the process. There was no opportunity to compare the butter made by this process with that made from cream alone, as it is universal in this island. All the butter that I saw was exceptionally good, but this was probably due in a great measure to the character of the cows and the excellence of their keep. We had less occasion to examine there than in Jersey, or we should very likely have found the same variety as there."

THE STOCK YARD.

M. B. Sturges' Short Horns.

The *Washington Independent*, Alameda county, has some notes of a visit to the herd of M. B. Sturges, at his ranch near Washington Corners. We make the following extracts: Mr. M. B. Sturges, who has taken some pains in the matter of fine stock, and has found the benefits of so doing both in what he has sold, as well as in what he still retains for his own use. We will mention some of his stock:

His oldest is "Lucy Ann the Tenth." She is red, with a little white on her back—11 years old, and has been in his possession four years. From her he has had four calves: "Mazurka Duke," "Cyrus Duke," "Lady Maynard," and "Mission Peak." "Mazurka Duke" weighed 1,225 pounds when 16 months old, was like its mother in color and was sold at that age to a gentleman from Sitka for \$272. "Cyrus Duke" was of like color, weighed 1,375 pounds when 15 months old, and was then sold to Capt. Hasinger, of the Sandwich Islands, for \$225. "Lady Maynard" is of a cherry red color, is 18 months old, and weighs about 1,000 pounds. Mr. Sturges has been offered \$300 for her, but refused the offer when she was 10 months old. She is a beauty, and with calf by the first "Duke of Alameda." "Mission Peak" is but six months old, of like color with the rest, is at home with Mr. Sturges, and bids fair to be as fine as "Mazurka Duke" or "Cyrus Duke." These animals are on record in the American Short Horn herd book, and will be recorded in the next volume of the "American Short Horn Record." They are all thoroughbred Durham.

The first "Duke of Alameda" mentioned above is a dark cherry red, 14 months old, and has just been sold by Mr. Sturges to Jones & Hagan, of Santa Clara county, for \$350. They are expected to exhibit the same at the fairs all over the State this year as the best yearling bull, and at the head of the young herd. There is also the second "Duke of Alameda," only two weeks old, also a bright cherry red and a beauty, weighing over 100 pounds. There is the red "Rose of Summer," three and a half years old, a fine milker and a fine breeder, from the superior milking family "Seraphina," and so valuable every way that Mr. Sturges would not take \$700 for her.

The original cost of "Lucy Ann" was \$405, and that of the "Rose of Summer" was \$300. Mr. Sturges has sold from the produce of the above to the value of \$550, and has now on hand on his farm five head which he values at over \$1,200. And this is all the result of four years' experience in this business.

The prices at which the above stock has been sold and the value of those not sold, show conclusively how profitable it is to take pains in rearing the very best breeds of cows. It costs but little more to raise the best Durham stock than inferior scrubs. But how great the difference in value for one's own use or for sale to others.

LIVE STOCK REPORT.—In their semi-annual circular, Falkner, Bell & Co., of this city, make the following remarks on live stock: "Owing to the scarcity of fat stock in the spring of the year, prices of all meats ruled high during that period. Holders being anxious to realize, a reaction took place, and with liberal supplies the market rate gradually declined. From information received, there is now no doubt that large stocks of both fat sheep and cattle have passed into the hands of dealers, and we look for better prices as the season advances. The depression in the wool market has had the tendency to deter investors from the purchase of breeding stock, and prices now rule low, offering a favorable opportunity to persons who would wish to embark in the business, and who are only deterred by the depressed state of affairs, which, in our opinion, is but temporary. Losses in stock have been fully equal to what we predicted in our circular of January 1st, which, coupled with the light lambing, and the general recovery of trade, which we trust to see during this fall, will sooner or later have its effect on the live stock interest of the State. In the meantime, we would strongly urge upon owners the necessity of paying close attention to the breeding of their flocks and herds, and by the use of sires of undoubted pedigree, reap results which, in all parts of the world, have ended in certain success."

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

A Plea for Woman's Rights.

EDITORS PRESS:—Enclosed I send you a petition and circular, gotten up by the Equal Rights League of this place, which we should be glad to have you publish. Is it not time that concert of action should be inaugurated throughout the State? I should think the women of the Grange would be alive to the importance of the matter. Now is the time for the women of this State to work for their freedom, if ever. We are circulating the petitions extensively in this and adjoining counties, and hope other counties will do the same.—MARY A. ASHLEY, Santa Barbara, Cal.

To the Friends of Equal Rights.

The Santa Barbara Equal Rights League send greeting.

You are aware that a Constitutional Convention meets in September. Men of all classes are looking to it for the righting of their wrongs. They remember that "he who would be free, himself must strike the blow." This axiom applies also to woman; if she desires equal rights and equal privileges, she must use every honorable means to obtain them.

We see that important changes are needed to place man and woman on an equality before the law. We ask for these changes for the following reasons:

1st. Because "all just governments derive their powers from the consent of the governed." Woman is governed by laws to which she gives no consent.

2d. Because woman has the same inherent desire for and power of self-government as man, and the same natural right to exercise that power.

3d. Because the ignorant and intemperate are enfranchised and entrusted with the privilege of making laws to govern her, and of employing their vested powers in restraining her from exercising a citizen's highest prerogative, the right of ballot.

4th. Because woman is taxed, and taxation without representation is as much tyranny in 1878 as in 1776.

5th. Because it is a citizen's right to be tried by a jury of his peers, and woman is not so tried in California.

6th. Because the well-being of the State demands that thousands of hard working women, who add greatly to its wealth and its intellectual and moral worth, should not be crippled in their power of usefulness.

7th. Because with the ballot in the hands of all good citizens, the honor of our State would be asserted and the perpetuity of our government assured; for a nation's injustice is a prelude to a nation's decay.

For a more general recognition of these rights we solicit your earnest patronage and hearty co-operation. Will you, by pen, speech, petition, and every other legitimate method, aid in breaking woman's political bonds?

We want the names of the residents of the State of both sexes. By united effort we hope to bring the subject before the people, trusting the result will be the equality of the sexes before the law. To this end let us labor, and wait if we must.

Will those circulating the petitions in Santa Barbara county return them to the undersigned by the first of October? When the petition is full other sheets can be added.

MARY A. ASHLEY,
President Equal Rights League
MARY FRANCIS HUNT, Sec'y.
Petition.

To the Constitutional Convention in Sacramento, California, assembled. The undersigned citizens of California, respectfully petition your honorable body to so amend the constitution that no citizen of the State shall be disfranchised on account of sex.

Celebration of the Fourth at Pilot Hill.

EDITORS PRESS:—The Fourth of July, 1878, is numbered with the days that are past and gone, and in the cities the celebrations, I presume, have all been on a grand scale. But do you ever think, or those who participate in the grand celebrations, of the many in our State that are deprived of such enjoyment, of the farmers, with their wives and families, that know of the "Fourth" only by what they read in the papers, and spend the day in toil? There are many in this vicinity who cannot make it convenient to join in the festivities of the day even in the neighboring towns. But this year a few determined ones concluded that they had had enough of staying at home, and if they could not go the Fourth, to make the Fourth come to them. A charming spot in a thick grove of willows, on the ranch of Mr. Thomas Taylor, was selected for the scene of our festivities, the underbrush cleared away and openings made in which to spread our tables and place our benches and chairs for the accommodation of the company. At an early hour on the morning of the Fourth, the four-horse wagon, transformed for the occasion into a "chariot of state," trimmed with evergreens and wreaths, and bedecked with flags of our country, drawn by four spirited horses, drove to the door. And where in all the cities could be found a happier party than those assembled in that old wagon, beneath the waving branches of evergreens and the floating "stars and stripes?"

Away we went to the "Willows," stopping on the way at every farm-house to add merriment to our gay party. Arrived at the grounds, baskets and boxes are unloaded, containing cakes, fruits, chickens, turkeys and all the good things which we Grangers know so well how to prepare, from past experience in cooking for our harvest feasts, and although this was not a Grange celebration, but a general gathering of farmers and their families, yet, as would be expected, there were present many members of our Order.

And now the last wagon has arrived with its load of happy faces, and its donations for the table. But think not that while we have been preparing a feast for the body, food for the mind has been forgotten. Mr. J. W. Davis, president of the day, after a few remarks befitting the occasion, announced the programme.

First in the order of our exercises came that grand old hymn, known and sung by thousands throughout the Union, "America."

Second—The reading of the Declaration of Independence, by one of our Grange Matrons.

Third—A poem, "Hail to the Fourth," written for the occasion by Nellie S. Bancroft, one of our party, a niece of your well known author and publisher, H. H. Bancroft. It was read in a very effective manner by Mr. A. W. Gregg. It is worthy a place in your columns.

Hail to the Fourth.

As o'er the world in proud array,
Our banner spreads its folds to-day,
And land and joyous notes proclaim—
That good old Fourth has come again.
We feel our bosoms swell with pride,
Our hearts uplift with sudden joy!
To know our land so fair and wide,
Is held in Freedom's safe convoy.

And thou, Oh Father, Great Divine,
Who hold'st this Universe of Thine,
We thank thee that another Fourth
Has dawned in triumph o'er the earth.
We thank thee that we still may stand
United, clasping Freedom's hand;
The bright stars waning o'er each head
In honored token of the deed.

Here, unto each, and all who greet
The light of proud Sierras peaks;
And unto every man who'd wake
The glories of our Golden State;
Ye husbandmen who daily toil—
To reap the abundance of our soil;
And laborers whose humble lot
Hath sanctified the lowliest cot.

Ye Pioneers who early sought
This sunny clime with hardships fraught,
And in your lowly cabin homes
Saw where the light in the future shone.
Are ye not glad for the hardships told,
When ye eagerly sought for the shining gold?
For by the toil of an earnest hand,
Ye have wrought the glory of our land;
And ye smile on the progress ye behold—
Grown and increased a hundred fold!

We see in our mountains, rare beauties shiue,
Of the richest of harvests, the fruit and the vine;
And our cities resound with the clear, busy notes,
That up from the voice of industry float.
Then thrice welcome, and hail ye laborers all!
Ye builders of progress respond to our call!
Come forth! And all join in the voices of praise,
That welcome and greet this most blessed of days.

Take up, Oh! ye mountains, the strain that ye bore,
Till an echo it dies on Pacific's old shore!
And Oh! while we list to the boom and the roar—
Of cannons that mutter as fierce as of yore,
And see in their smoke wreaths the passion and hate,
That glow in the conflict of State against State;
We lift up our voices, in joyous encore,
'Tis the glad voice of peace, not the fury of war!

For Oh! while we boast of the pride of our land;
The pride that is sheltered by liberty's hand;
We know that 'tis Freedom that beams on our sight,
Like a beautiful star on the bosom of night!
And far—far above all thy pinions thou'lt wave—
Thou glorious emblem of truth and the brave;
While thy stars lift their bright spotless glory to Heaven,
And reflect back the light from her own azure riven.

And thou, Oh! proud bird of the storm-beaten height,
Shalt bear in thy talons, the glory of night!
In the voice of thy power thou shalt bear upon high
"E Pluribus Unum!" our nation's glad cry!
Then hail unto thee thou most glorious Fourth!
Hail to thee, day that gave liberty birth!
Long may'st thou wave over land and o'er sea,
Flag of our country, the brave and the free!

And here where the willows bend low o'er each head,
Breathing fond benediction o'er what has been said,
Where the rays of bright sunlight come flickering through,
We sing good old Fourth songs of praise unto you.
We offer thee toasts with our bounteous feast,
And prayers that thine honors shall e'er be increased.
We invoke Heaven's blessings thy future to aid,
In peace and in Union from age unto age.

Oh! long as the sunlight sweeps over the sea,
Caressing the waves in their low minstrelsy;
And bright as it shines on our proud mountain peaks,
With the soft pearls dew lying low at their feet;
Thus long and thus bright, Oh! most glorious Fourth,
Shalt thou dawn in thy triumph o'er all the glad earth;
Thus long and thus sweet shall thy glories resound
In the land where the noble and brave shall be found.

And now e'er to-day's sun shall sink into rest,
With his proud train of glory laid low in the west;
When the crimson and purple commingle with gold,
And thou with the Fourth's of the past art enrolled;
When the clouds bending lower take up the glad strain,
That swells in the voice of the people's refrain;
We offer three cheers! and a blessing for aye
To the glory of old Independence Day!

Fourth—Was sung a prayer for our country,
"God Bless Our Native Land."

Fifth and last came the dinner, with toasts and merry laughter that caused the birds in the boughs overhead to cease their songs, wondering what could be the occasion of so much merriment.

Near the "Willows" stood a large oak, covering with its shade nearly an acre of ground, several awnings were suspended from its branches. To this we repaired after dinner, some to swing, others to join in a game with græc hoops. All seemed to enjoy themselves. We parted at an early hour to go to our respective homes, feeling that the day had not been spent in vain, and each wishing that another year we could meet in like manner.

MRS. H. STODDARD.

Pilot Hill, El Dorado County, Cal.

Worthy State Lecturer's Appointments.

The State Lecturer will visit the following Granges on the day and date herein given, prepared to hold a private meeting at each Grange for the good of the Order, and also a public meeting at such hour as each Grange may determine, to which public meeting everybody is invited. We bespeak for Bro. Pilkington a most hospitable reception and large turn outs, and those who can ought not to miss hearing him on Grange topics, for he discusses them with an earnestness and ability positively his own.

I. C. STEELE,
Master of the State Grange.

Name of Grange.	County.	Time.
Grand Island	Colusa	Friday, July 12th
Willows	Colusa	Saturday, July 13th
Plaza	Colusa	Monday, July 15th
Farmington	Tehama	Wednesday, July 17th
Reading	Shasta	Thursday, July 18th
Millville	Shasta	Friday, July 19th
American Valley	Plumas	Tuesday, July 23d
Indian Valley	Plumas	Thursday, July 25th
Plumas	Lassen	Saturday, July 27th
Surprise Valley	Modoc	Tuesday, July 30th
Eagleville	Modoc	Thursday, August 1st
Cedarvale	Modoc	Saturday, August 3d
Northeast	Modoc	Monday, August 5th
Modoc	Modoc	Wednesday, August 7th
Davis Creek	Modoc	Saturday, August 10th
Crescent City	Del Norte	Wednesday, August 14th
Rivellutah	Humboldt	Saturday, August 17th
Sable Bluff	Humboldt	Monday, August 19th
Fernside	Humboldt	Wednesday, August 22d
Mattole	Humboldt	Friday, August 23d
Cahto	Mendocino	Tuesday, August 27th
Potter Valley	Mendocino	Thursday, August 29th
Lakeport	Lake	Saturday, August 31st
Cloverdale	Sonoma	Monday, September 2d
Healdsburg	Sonoma	Tuesday, September 3d

AGRICULTURAL NOTES.

California.

ALAMEDA.

CROPS.—Washington Independent, July 6: The farmers in every direction are as busy as they can be in this part of the county, finishing the cutting and baling of their hay and harvesting their wheat and barley. There is a large crop of hay and also of grain, but unfortunately in many places rust has materially damaged the grain so as seriously to diminish the anticipated proceeds of the crops.

CONTRA COSTA.

THE RUST.—Gazette, July 6: We hear this week some serious complaints of the effects of the rust, though most of those from whom we have gleaned opinions in the matter still think the damage will be comparatively slight. So far as we can learn, where other varieties have taken the rust, the Siberian wheat, even where sown side by side and on the same day, is untouched by the blight, and the opinion seems general that its hardy character insures it against rust in any stage of growth. Whether it is thus absolutely exempt from the blight or not, it is certainly much less liable to it than other varieties, while in yield it is equal to any and is said to take the market quite as well.

FRESNO.

GRAIN FIRE.—Expositor, July 3: Last Friday evening the grain field of Ph. Rohrbacher, on the north side of the San Joaquin river, caught fire, and before the flames could be checked about 150 acres of wheat, standing in the field, and two stacks of hay were burned. We have not learned whether or not the field was insured. The loss will be between \$3,000 and \$4,000. A portion of Col. Lane's range and fence were burned.

GOBBLETS SITTING.—A. T. Bonfield informs us that he has two turkey gobblers, at his farm on Big Dry creek, that have taken the strange notion of "sitting." They have taken possession of two nests, where the turkey hens were laying, and have now been sitting over two weeks. If they succeed in hatching out a couple of broods of young turkeys, it will be hard to determine who are the mothers of the broods.

LAKE.

RUST.—Bee, July 4: We have heard some complaint of rust on wheat in some parts of the county, but from all we gathered, it is confined so far to the blade, and may not damage the grain but little. It is now pretty well settled that the crop in Lake county will not be an average one.

LOS ANGELES.

WHEAT.—EDITORS PRESS:—The wheat in this section is nearly all destroyed by rust, and the barley crop will not be one-third as large as anticipated. We have had almost uninterrupted cloudy weather from the first of March to within 10 days. The consequence is that the straw, ripening in the shade, grew very thin, and neither afforded sufficient nutriment to fill the grain, nor to support its weight; and the grain lodged, and the barley is very light. But little can be cut with headers, and those whose grain is worth the trouble are using reapers and mowers.—L. FREEMAN, Los Angeles Cal.

THE BEE SEASON.—Outlook, July 3: Last Sunday we took a horseback ride out to the bee ranches of Mr. Stone and Messrs. Bergk & Snook, in Cox's canyon. Both are in excellent condition. It was a bright and warm day, and the bees were hard at work. The former has about 140 stands and the latter 150. Messrs. Bergk & Snook have already extracted 8,000 pounds of honey, and they expect to average 200 pounds to the stand for the season. The bee feed seems to be abundant in the mountains, and it will last longer this year than usual, owing to the backwardness of the season.

HORSES KILLED BY BEES.—Santa Ana Herald, July 4: A span of valuable horses were so badly stung by bees at the Salce ranch, in the

Santiago canyon, on Thursday last, that at the time our informant left it was thought to be impossible to save them. This makes the second team lost from the same cause this season.

TWO FAIRS.—Express, June 6: The Conference Committee of the Agricultural and Horticultural Societies have determined to hold the fairs of both societies during the week commencing Monday, October 14th. An amicable arrangement is made by which each organization assumes charge of the matters coming strictly under its jurisdiction, and, by this means, while there will be no clashing of interests, each will receive some benefit from the attractions of the other. Our readers should not infer that there is any combination like that of last year, but merely that the societies are friendly in their relations with each other, and thus amicably agree to separate for mutual benefit.

MONTEREY.

RUST.—Index, July 4: In conversation Monday with Mr. Jesse Wilhoit, farmer on the Cooper ranch, we learn that the rust is very bad in that section. He tells us that none of the farmers on that ranch will garner over half an average crop of wheat this season. On about 300 acres of his own land the wheat looked so good two weeks ago as to promise a yield of between 30 and 40 sacks per acre; now he tells us it is not worth the threshing—will run him in debt to harvest it. He has, however, about 40 acres of barley that is in fine condition, and will yield between 45 and 50 sacks per acre. He intends cutting the wheat and threshing on it one day, and, if it falls too far behind, will turn the remainder into hay and hog pasture. Mr. Wilhoit says, also, that on the adjoining farm of Mr. Lawrence Dee the wheat looks somewhat better than his, but in a week more will be totally annihilated by this ravenous pest, and will not yield (not even "dwarf" grain) four or five sacks per acre where an average of 40 was expected.

PLACER.

FINE FRUIT.—H. Barrett, of the Nickerson ranch, near Lincoln, informs the Herald that the fruit crop is generally good in quality and quantity. The army worms which are making such ravages in some parts of the foothills have not yet reached his place, though that they may do so is not improbable.

SACRAMENTO.

EDITORS PRESS:—Grain on the high land has turned out well. It will run from 20 to 25 bushels to the acre. Small fruit is good and of the best quality. The peach crop is light along the river; what there is is good. Apples and pears are falling off because of the codling moth. Grapevines are hanging full; some few apprehended trouble, as some of the shoots were turning red and the bunches not setting. Army worms have destroyed a few of the vineyards and are working in the gardens; working southward, before was going northward. Some of the finest potatoes that came to market have been grown on the plains this year. Vegetable raisers state that by good manuring and cultivation with a small quantity of water, they can raise as good vegetables as along the river. Farmers, taken as a whole, had but little to complain of, although everything that is raised is commanding low prices in market. Each one must economize and live according as the times demand. The cash system should be enforced.—GEORGE RICH, Sacramento, Cal.

SAN BENITO.

RUST IN PAJARO VALLEY.—Transcript, July 6: The fogs the past week have done considerable damage in this valley. It the foothills there will be an enormous crop, but in low places, where the fogs have been heavy, rust is very prevalent. We hear of one piece that will not pay for harvesting.

SAN JOAQUIN.

A HUGE GRASSHOPPER.—Stockton Independent, July 4: The most monstrous grasshopper we have ever seen is on exhibition at the office of F. M. West, County Treasurer. It is preserved in alcohol and was captured some time since near Copperopolis. It is nearly six inches long and its body is an inch and a quarter in depth, while its head is as big as a man's thumb. The wings when spread must have measured ten inches from tip to tip. The legs are as large as a lead pencil at the body, and about four or five inches long. The enormous body is quite translucent and its ribs can be distinctly seen. An army of that species would eat up a quarter section of wheat as slick as a whistle in about five minutes.

THE UP-RIVER WHEAT TABLE.—An idea of the importance of the trade on the upper San Joaquin river may be gained from the statement of the fact that there are no less than 15 steamers and 25 barges plying constantly on the river between this point and the head of navigation. The following are the names of the principal steamers: Harriet and Ceres, owned by Miller & Eaton, of San Francisco; Pioneer, Constance, and Washington, owned by the California Transportation Company; Clara Belle and Empire City, owned by Capt. I. D. Hamilton; Herald, owned by the California Steam Transportation Company; Caroline, owned by Capt. Forsman. There are besides several independent boats, as the Alice, Alvarado, and Amelia. The steamers carry from 50 to 250 tons, and the barges from 200 to 500 tons each. Will some of our Congressmen take a squit at this item and say that the San Joaquin is an unimportant stream, not worthy of Congressional recognition? It is predicted that as the river falls accidents are certain to occur

from collision with the snags with which the river is beset, as there are a number of pilots running on the river who are unfamiliar with the stream.

FATAL BOILER EXPLOSION.—A terrible accident occurred on Dr. D. J. Locke's ranch, a mile and a half from Lockeford, at 4:30 P. M., July 2d, by which the engineer of a threshing engine was instantly killed, and a man named Wm. Littleton, driving a water cart, was considerably bruised, but not seriously hurt. The engineer's name was Josiah S. Bartlett, well known in this city, having learned his trade at the Globe Iron Works. He was considered a competent mechanic, but had had little practical experience in running an engine, and appears to have become confused by the breaking of a water gauge about an hour before the accident. The engine and boiler was an absolute wreck, there being nothing left standing but the fire-box. Pieces were found scattered about the field for a distance of 200 feet away. One piece to which was attached the cylinder, weighing 300 to 500 pounds, was thrown 75 feet, and the entire machinery was torn to fragments. The enormous stack of wheat which was being threshed is thought to be so filled with fragments of iron that it would be ruinous to a threshing machine to thresh it. The engineer was under the engine at the time of the explosion, engaged in shutting off the mud valve. His body was driven into the hard ground several inches and thrown out one side a distance of 18 feet, plowing a furrow in the ground the whole distance. The head was blown away and the limbs were frightfully mangled. Several of the workmen narrowly escaped injury, as the fragments were hurled in every direction. At the Coroner's inquest one of the witnesses testified that from the appearance of the wreck the boiler must have been red-hot—short of water, with a pressure of steam of more than 150 pounds.

SIERRA.

GRASSHOPPERS IN SIERRA VALLEY.—*Reno Journal*, July 8: A gentleman from Sierra valley informs us that the grasshoppers are destroying a great deal of grain in the valley. Out of one field from which 400 tons ought to have been cut only 150 tons were left, and even this was saved by the exertions of the farmers. The hoppers are now all in the north end of the valley, but when this is all eaten up they will no doubt turn their attention to the lower end. They raise in such clouds that the sun is darkened, and shortly after they light on a field nothing is left but a mass of unsightly stalks. They do not touch the wet land, not will they touch the hay after it is cut and cured. Cases are cited where the insects have gone just ahead of the mowers and destroyed the majority of the grain. In one such case out of 200 tons only 25 were saved. Dairy men are suffering considerably because their grazing lands are being destroyed, and this with the low price of butter is causing many to leave that business entirely. Probably one-half of the entire crop of the valley will be lost. Fortunately 2,000 tons of hay was carried over from last year. This will keep the price this year about as usual, but next year it is likely a notable advance in the price will be apparent. The grasshoppers have possession of Sierra valley, and what is worse young ones are hatching every day, while the old ones are laying eggs and eating grass. [Some facts in this connection may be found in our article on the grasshopper in another column.—*EDITORS PRESS.*]

SOLANO.

GRAIN FIELD FIRE.—*Dixon Tribune*, June 29: The first grain fire of the season occurred Wednesday afternoon about seven miles east of Dixon, and destroyed about 140 tons of grain in stacks. It started in a field of S. G. Little, where George Cooper's threshing machine was in operation. The fire originated from some ashes left near a stack which had been finished and the machine moved away. It was quickly discovered, but no water or other facilities were at hand to extinguish it. There was no water wagon handy and no Babcock. The wind was blowing from the northwest, and the fire spread rapidly in the opposite direction. The crew of the machine, that of Kline's machine working near, and gangs from the places of John Burke, Samuel Sneed, James Miller and others, all turned in to help extinguish the flames. Sneed brought a Babcock, and some other party another; Miller came with a gang plow and did good service by drawing a furrow which the fire did not cross; and the rest brought sacks. But before it could be stopped the fire had run over a mile and destroyed nine stacks of grain—two for Little, five for Paul Synder, and two for Leonard Geithle. The latter's house and barn were only saved by lively work. The threshing machine had to be pulled out of the way in a hurry to save that. Estimating 15 tons to the stack the loss would amount to between three and four thousand dollars. None of the parties were insured. The misfortune falls heaviest on Leonard Geithle, whose entire crop was burned.

RUST.—*Dixon Tribune*, July 6: The rusty wheat in this vicinity appears to lie in a broad belt, commencing near Wm. McCann's place, running northwest through Tremont township, crossing Putah creek, and extending to Cache creek, in Yolo county. However, the fields are not by any means uniformly affected. Some here escaped entirely. Mr. George Foster states that in one of his fields where he expected 300 sacks, he will not have more than 100, all owing to the rust.

FIRE.—*Rio Vista Enterprise*, July 6: Last Saturday, at about 12:30 o'clock, a dense black smoke arose from the hills in the direction of Toland's Landing. In a short time several teams, loaded with anxious men, started for the scene, every one knowing what could only be the cause at this season of the year. It was found that a fire had started on the land rented by Mr. A. W. Elliott, some three miles below town. The fire had been got under control by the neighbors before the willing men from town arrived, but some 45 acres of the best wheat had been destroyed. The grain had not yet been headed and the fire did not extend to the neighboring stacks, though in one instance it was checked within 20 feet of two large stacks of grain. The loss is placed at about \$1,000.

SONOMA.

GRAIN IN NORTHERN SONOMA.—*Flag*, July 4: The impression seems to have got abroad in some directions that there would be little more than half a crop of wheat in northern Sonoma this year. We have entertained no such idea, for although some fields were whole or in part badly cheated and some nearly drowned out, the favorable weather in the fall had enabled the sowing of a far greater acreage than usual, and the very causes of cheat in the low lands have brought an extra crop on the uplands. All of which we calculated would tend to bring up the average yield to its usual figure. The grain is largely cut and the threshers are fairly in the fields; so to verify our surmises, we have made a few inquiries from farmers whose grain has been threshed and the yield ascertained. Mr. Metzger, of the Geyserville section, reports that his wheat filled better this year, was plumper and heavier, and that his yield was even greater than the year before; one field averaged 32 bushels. It is his opinion that the yield of that section will aggregate larger than in 1877, and this we found to be the general opinion for the whole country around us. One thing noted is the universal reports of well-filled, heavy heads, plump and beautiful grains. Several old farmers say they never saw as handsome grain as northern Sonoma turns out this year.

HEAVY LOSS OF SHEEP.—*Santa Rosa Democrat*, July 6: The shearing season, which has just closed in the northern coast counties, has developed the fact that the loss of sheep in this section from the continuous storms of last season, was far greater than was supposed. Where sheep run at large, as is the custom here, rather than to herd them in bands, as is the habit in the southern part of the State, no accurate count can be made until all the sheep are collected for shearing. This tells the story of the losses for the season. We think it is safe to say that in Mendocino and Humboldt the loss has been fully equal to one-half of the aggregate of all the sheep in those counties. In Sonoma county the loss was not so great, as the sheep pastures are less broken and at much less altitude than those of the counties first named. In addition to this the price of wool is low, and the sheep growers who have usually had a good margin on the profit side of their ledger, find themselves, this season, hard pressed to pay expenses. With the heavy losses in the southern counties last year from drouth, and those in the northern counties this year from opposite cause, it is not out of the way to estimate that there is one-third less sheep in the State to-day than there was two years ago. Should the coming season prove favorable, this loss can be recovered, and that is one of the great advantages of sheep growing, a heavy set back can be more speedily remedied than in any other branch of agriculture. Two good seasons, with good prices for wool, would put the sheep farmers on velvet again, as the brokers say when stocks are up.

STANISLAUS.

AGRICULTURAL STATISTICS.—*News*, July 6: County Assessor T. A. Wilson, last Monday, handed in his completed assessment roll. According to the return, the total cash value of all property in the county is \$6,206,138. The total value of real estate is set down at \$5,058,335. Total value of personal property, \$1,147,803. The total acreage of the county is set down at 771,039 acres. The amount of money in the hands of the people or on special deposit amounted to \$30,312. There were found in the county 1,407 wagons; six thoroughbred horses, valued at \$3,250; 583 horses classed as American, valued at \$38,880; 3,260 half-breed horses, valued at \$108,024; 872 Spanish horses, valued at \$16,502; 1,460 colts, valued at \$20,705. There are 1,700 American cows reported, and 3,656 stock cattle. There are 9,220 fine sheep, valued at \$36,860, and 151,897 head of graded sheep, valued at \$190,851. There are also 52,363 lambs, valued at \$27,289. The total amount of poultry is set down at \$8,556.

RAINFALL.—The following is the record of last season's rainfall at Hills Ferry, as kept by S. Newman, the leading merchant of that place: December, 1877, 0.67; January, 1878, 2.47; February, 4.88; March, 1.74; April, 1.16; total, 10.92. There was a trifle of rain prior to December, but the gauge was not in position to record it.

TULARE.

RUST.—*Delta*, July 6: From all parts of the San Joaquin and Tulare valleys come reports of rust in wheat. This will cause a great shrinkage in the crop, which would otherwise have been unusually large this year. It is much worse in Tulare county than was at first supposed, but not so bad as in other counties.

TUOLUMNE.

EDITORS PRESS.—The farmers of this county are busily engaged with their abundant crops. The county is nearly self-supplying; a few more years and it will be so. Many farmers who used to cut all their crops for hay are turning the same into grain, as there is an over-supply of hay everywhere. Much of the spare barley will find its way to Bridgeport and Bodie, over the Mono road. The road is now free from snow, and the stages and fruit wagons are making regular trips. This Mono road is proving a blessing to this county, increasing its traffic from year to year. Finally a railroad will place us next-door neighbors with the counties of Mono and Inyo. A timber region lies between, which is surpassed by no timber belt in California. Fruit raising and farming are both pleasant and profitable among these foothills, and will become more popular as the great plains become fully occupied. Farming on a large scale is out of the question in a broken country. But enough land for garden and field may be found and adapted to the creation of comfortable and happy homes. No more generous or social citizens may be found than those who are comfortably settled in this mild and genial climate. We are happy to announce a general prosperity. No idle hands or hungry stomachs among us.—*JOHN TAYLOR*, Mount Pleasant, July 7th.

YUBA.

THE ARMY WORM.—*Appeal*, July 5: We notice the appearance of the army worm on Napoleon Square. These worms are of dark brown color, one and one-half inches in length, rather active, and get fuzzy on the body as they advance in age. The query is, where did these marauders come from and whither are they traveling?

News in Brief.

The grape crop in Sonoma county promises to be large.

A rider has been killed at the Long Branch races.

SENATOR BOOTH is expected at Sacramento by August 1st.

YOUNG FREMONT is to be his father's Secretary in Arizona.

The army worm has appeared in the vicinity of Woodland, Yolo county.

THERE are over 80,000 children in San Francisco under the age of 18.

KING HUMBERT and young Menotti Garibaldi are the best of friends.

The aggregate appropriations made by the last Congress is \$137,203,933.

The bonanza mines have turned out \$100,000,000 in gold and silver bullion.

GENERAL FREMONT's salary as Governor of Arizona will be \$2,500 per year.

MANY fatal cases of sun-stroke are occurring in the East, also a few in California.

THOMAS LOWE of Coos Bay, has a second crop of potatoes ready for market.

A MAN named Charles Whittier, a cousin of the poet, died lately at Downieville, Cal.

IN New York, July 6th, Dr. Carver broke 99 out of 100 glass balls thrown in the air.

The new Mormon temple in Salt Lake, now being built of granite, will cost \$5,000,000.

The army worm is said to be destroying the Dungeness, Washington Territory, potatoes.

TWENTY Nez Perce Indians have been organized at Fort Lapwai as scouts for Howard.

MAJOR DOWNIE, after whom Downieville, California, was named, is visiting Virginia City.

The waters of Tulare lake, California, are higher this year than during the past 15 years.

A NEW chicory factory has been recently built on Brandt's ranch on the San Joaquin river.

AUGUSTUS HARTSO was killed by a caving of earth in a mine at Blackfoot, Montana, recently.

ANOTHER "fan-tan" house is to be built in Chinatown, at Reno. The license for the game is \$400 per quarter.

THE Nihilists in Russia show their contempt for religion by smoking cigarettes in cathedrals and churches.

WILLIAM CULLEN BRYANT left property valued at half a million and had an annual income of about \$10,000.

By order of the Secretary of War the United States army is to be recruited up to its full force—25,000 men.

TEXAS claims to have 3,000,000 inhabitants, and to be the third in population and the first in size of the States in the Union.

JOHN O'SHEA, Coroner of Lake county for the past eight years, was drowned in Soda bay near Lakeport, last week.

The campaign against the Cubans cost the Spaniards 80,000 men, and the island is represented as a vast cemetery.

The directors of the Atchison railroad expect to push the road as far as Santa Fe, New Mexico, in 1879.

TOM THORP, while drunk at Gridley, Butte county, fell from a horse and fractured his skull, and died a few hours afterwards.

The Chief of Police announces that since the new police has been assigned to duty but few burglaries are reported.

DR. JAMES AYER, the patent medicine man, died, last week, in Massachusetts, worth a good many millions.

The wheat crop the coming year in the United States will reach the large sum of 400,000,000 bushels.

FOUR or five white laundries have been started in San Rafael, but there are none new, and John holds the fort.

WHILE bathing at Skowhegan, Me., Osgood Willey attempted to rescue his son, who got beyond his depth. Both were drowned.

THE San Bernardino *Times* says there is no market for honey in that town. The finest white sage, in section boxes, can hardly be given away.

LAST week, C. F. Germann, a shift boss at the Caledonia mine, at Gold Hill, fell to the bottom of the shaft, a distance of 1,450 feet, and was torn to shreds.

Advices from Bolivia state that much suffering exists in Cochabamba. The usual rains have not fallen, and the crops are destroyed.

THE steamer *J. B. Walker*, for Constantinople, is now ready for sea at New Haven, with a cargo of war material valued at \$2,000,000.

THOUGH hundreds have been punished for publicly regretting the failure of the attempts against Emperor William's life, there is still no cessation of similar offenses.

A MAN named Anglum, at Chile gulch, Calaveras county, on the Fourth had an ignited giant powder cap too long, when it exploded and blew his hand off at the wrist.

THE condition of affairs on the Mexican border is regarded as very serious by the Government, and will receive attention at an early meeting of the Cabinet.

PERU has for the first time indulged in a census, which gives the population as 2,699,945, of whom 1,365,045 are males; 100 men to 98 women.

OIL has been struck at a depth of about 1,000 feet in the well of the Los Angeles Oil Company, Sespe district. It yields 30 barrels per day of a fine quality of oil.

THE spring clip of wool of Arizona Territory is estimated at 1,000,000 pounds, value between \$120,000 and \$150,000, after deducting cost of shearing, sacking and marketing.

No fireworks were allowed in the public parks of New York on the last Fourth of July, whereby much expense to the city was saved, and the losses by fire greatly diminished.

POPE LEO, after first making friendly overtures to the Emperor of Germany, has, by the advice of the ecclesiastics surrounding him, determined to adhere to the policy of Pius IX.

AN article will be introduced in the Constitution about to framed in Washington Territory limiting the amount of land which may be acquired or held by any individual or corporation.

JOHN MESSINGER, near Hillsboro, Oregon, fell from the top of a fir tree which he was trimming, a distance of 80 feet, crushing him horribly. He was a fleshy man, weighing about 200 pounds.

WM. WATT, a well-known miner and a prominent citizen of Nevada county and the State, died at North Bloomfield, on Saturday last, from injuries received by being thrown from a carriage a few days before.

PITTSBURG was visited by a severe storm on the Fourth. Several houses were struck by lightning, and in the rural districts houses and bridges were washed away, and crops greatly damaged.

THERE were 76 deaths in the city last week. For the corresponding week last year there were 78 deaths, and the average weekly mortality the corresponding weeks the past five years was 87.

A PAPER has been posted in all cotton mills of Stockport district, England, giving a fortnight's notice of 5% reduction in wages. Operatives seem to favor resistance. A strike there would affect 25,000 people.

"MOLLIE MCCARTHY," the California mare that ran against the horse "Ten Broeck," over the Louisville track, July Fourth, broke down and was distanced. Both animals were badly used up.

THE country east of the Cascade range, in Washington Territory, is settling up fast. The records of the Walla Walla Land Office show that upwards of 300,000 acres of land have been entered during the past year.

LAST week, Numa Dupera, of San Francisco, aged 16 years, who was spending his vacation at Noyo, in Mendocino county, had his neck broken. He was searching for eggs on the edge of a cliff and fell a distance of 45 feet.

JOE MARTIN, aged 13, of Haywards, Alameda county, had his right hand shockingly torn, and his eyes, face and bare legs badly burned, by the explosion of a flask of powder on the Fourth. Frank and Manuel Thomas aged seven and three years, were also considerably burned.

JOHN A. SWAN, a pioneer of Monterey, an Englishman by birth, says in his autobiography: "All my share of the gold and land in California, after 35 years passed on the Pacific slope, is an old adobe house in Monterey, once the first theater in California, with a lot attached to it."

A REPORT from Anaheim, Los Angeles county, says: The cut and wire-worms have entirely disappeared. The corn crops are looking splendid. The barley crop has been entirely exaggerated; it will not yield more than five sacks to the acre. The rye crop will prove most remunerative of all.

ACCORDING to the latest returns, the cultivated land of France is divided into 5,500,000 properties. Five millions are under six acres. Belgium has a like subdivision of property. In Ireland, on the other hand, 110 owners hold more than one-fifth of the soil.



Mr. Bryant's Last Poem.

Mr. Bryant's literary life extended over a period of 74 years. In 1804, at the age of 10, he printed his first poem in a Massachusetts country paper; and on February 22d of the present year he wrote his last poem as a contribution to the Washington birthday number of the *Sunday School Times* of Philadelphia, the six noble stanzas given below:

The Twenty-second of February.

Fair is the February sky,
And brief the mid-day's sunny hours;
The wind-swept forest seems to sigh
For the sweet time of leaves and flowers.

Yet has no month a prouder day,
Not even when the summer broods
O'er meadows in their fresh array,
Or autumn tints the glowing woods.

For this chill season now again
Brings, in its annual round, the morn
When, greatest of the sons of men,
Our glorious Washington was born.

Lo, where, beneath an icy shield,
Calmly the mighty Hudson flows!
By snow-clad fell and frozen field
Broadening the lordly river goes.

The wildest storm that sweeps through space,
And rends the oak with sudden force,
Can raise no ripple on his face,
Or slacken his majestic course.

Thus, 'mid the wreck of thrones, shall live
Unmarred, undimmed, our hero's fame,
And years succeeding years shall give
Increase of honors to his name.

What the Poor Girls Need.

Pater and Mater Familias sat—
Their visages puckered with care—
Pond'ring what they should do with their girls,
Their girls with the "auburn" hair.
"They play, and they sing, and they dance," she said,
"And they sketch with pencil and pen;
They speak the German, and French, and draw"—
"Oh, yes!—any object but men;
And there they all stick," the old man growled,
"With all their gabble and Dutch!"
And he gave the poodle beneath his chair
A prod with the point of his crutch.
"But what can they do that is useful?" he yelled,
"With an oath that was really shocking."
"Can they sew, or sweep, or cook, or clean,
Or darn the holes in their stockings?"
"Darn the holes in their stockings," she cried,
"With a half hysterical shriek;
"Ah, too, indeed? What the poor girls need
Is a thorough knowledge of Greek!"
—*Boston Commercial Bulletin.*

Leona's Pride.

"Marry a mere carpenter!" said Leona Bracebridge. "No, indeed!"

She was tall and pretty, with dark brown hair, lovely blue-gray eyes, with long, curled lashes, and a fresh red and white color in her face; and old Mrs. Lynton was short and stont, with a double row of suspiciously bright brown curls, and a cap which was not trimmed with the freshest of ribbons. Mrs. Lynton reddened at the girl's remark.

"He's a carpenter, I know, Leona," said she. "But as for being common—"

"Oh, you know what I mean," said Leona. "We have been expensively educated, Zoe and I and papa was a lawyer, and mamma was distantly related to the Severns of Severn Manor."

"Yes," said Mrs. Lynton, "but all that don't help you to a penny now. And as you have been my guests for three months, perhaps it isn't so very unnatural that Felix should think—"

"Oh, if we have worn out our welcome," interrupted Leona, haughtily.

"It isn't that my dear," said the old lady. "Goodness knows you are welcome to stay here as long as you can put up with our old-fashioned ways. But it's most a pity, isn't it, that you can't make up your mind to a comfortable home here, with a man that loves the very ground you walk on?"

"I am very sorry, Mrs. Lynton," said Leona. "Because Felix is very kind, and I love you dearly, but I never could entertain the idea of becoming a mechanic's wife."

"Just as you please," said old Mrs. Lynton, knitting away until her needles seemed to flash magnetic fire.

And Leona went up stairs to the little apartment where her sister Zoe was cutting out gingham aprons.

Maurice Bracebridge was a gentleman—one of the seedy, impoverished kind, that are always writing begging letters and borrowing five dollar bills—and he had brought up his daughters at Madam Lanrelli's seminary, until that lady declined to receive the two girls any longer without the accompanying ceremony of a small payment on account.

And then he had hired lodgings of Mrs. Lynton, and he died there leaving Zoe and Leona penniless. Mrs. Lynton was a kind soul and had never told the poor young orphans that their father had not paid her a solitary cent.

"What would be the use?" said she. "Poor lambs, they've got nothing to pay with!"

Leona was a beauty, with a soft contralto voice, a willowy, graceful figure, a face that every one turned instinctively to look at the second time; but Zoe the younger sister, had not been so favored by nature.

She was slight and below the medium stature; her face although pale and sweet, was not one to attract admiration, and she was shy and retiring. But somehow Zoe made friends everywhere.

"Zoe," said Leona, impetuously, as she flung herself into a chair by the window, "we must go away from here."

"Go away?" "Oh, Leo!" cried Zoe.

"I don't like the idea any better than you do, but," said the beauty; "but Felix Lynton has been gross enough to fall in love with me."

"Has he?" and Zoe's face brightened; "Oh, Leo, how nice—"

"How awkward, you mean!" interrupted Leona, impatiently. "Have you got common sense, Zoe Bracebridge, or have you not?"

"Leo, did you refuse him?"

"Do you think I would marry a carpenter—I, papa's daughter—I, with my heritage of good looks and genius? Yes, I may as well speak it out."

"But he is very handsome, Leo, and very intelligent; and he owns the house, dear, and he's such a good son to his mother. Leo, darling, won't you consider your decision?"

"I certainly shall not," said Leona. "We must look out for a house somewhere else immediately."

"But I am afraid I can't do that, Leo," said Zoe, apologetically, "for I have promised Mrs. Lynton to help her with her plain sewing this winter, and she has two or three little music pupils for me, and—"

"Well, let that be as you choose," said Leo, yawning, "I don't mind being by myself just at first—it will perhaps give me more leisure for practice."

"For practice, Leo?"

"Yes," said Miss Bracebridge, with an imperial nod. "Mrs. Buckingham thinks I shall succeed on the operatic stage; and in the meantime I shall be writing out a few poems. Mr. Scribbleton, the English literature master of old Laurelli's, always said my compositions would look well in print. Don't you see, Zoe, I have a career before me? It would be madness to blight it all by becoming a carpenter's wife!"

"Do you think so?" said Zoe, pensively. "Well, I'm not a genius, dear, and I can't tell how geniuses feel. But Felix is very nice; and he is so good to his mother. And good sons always make good husbands, Leo."

So Leona Bracebridge went away, bidding her faithful friends a very cavalier sort of "good-bye."

"Felix," said Zoe, looking timidly up in her young host's sad and abstracted face, after the last trunk had departed, "you are not vexed with Leo?"

"Vexed, Zoe? No."

"Because I'm sure she never meant to hurt your feelings," coaxed Zoe.

"But she is a genius, you know, and geniuses are not like other people."

"She is a genius, little Zoe," said Felix, with a faint smile, "and I am a fool. Is that what you mean to say?"

"Oh, Felix, how can you be so cruel?" said Zoe; and she retreated into her little dark bedroom to cry, and wonder why it was that she was always saying awkward things.

Leona Bracebridge threw herself heart and soul into the new life. She practiced trills, and ripples and high C's with unremitting perseverance; she sat all day at her hired piano, and spent her evenings in studying up the plot of a novelette which was to take the unconscious world by storm. And so the year passed by.

"Sing?" said M. Peroux, the leader of the orchestra of the Opera House—"you sing, mademoiselle? A very nice little parlor voice, I dare say, but you'd be of no more use than a chirping sparrow on the stage. I should think your common sense might have taught you that."

M. Peroux was rough, but he was honest; and Leona went back in tears to her boarding-house, where a fat bundle of MSS. awaited her, neatly tied in brown paper, and labeled:

"For Miss Bracebridge. Positively declined."

"Is it possible that I am a failure?" said poor Leona to herself. "And with all these bills to pay, and the piano hire due for a year, and—"

But Miss Bracebridge's unpleasant reverie was cut short by the tapping of her landlady's knuckles on the door.

"I don't want to intrude, Miss," said the lady with belligerent air of one who means business, "but I've several heavy payments to meet next week, and I would be greatly obliged if you could just make it convenient to let me have a small payment. For it's nearly six months, Miss—I'm a tellin' you gospel truth—since I've seen the color of your money; and its just such boarders as you Miss, as drives honest folks like us into the bankrupt court."

Her nose reddened spitefully, and her voice grew louder, as she uttered these words, and poor Leona shrank away in spite of herself.

"I will communicate with my friends, Mrs. Battersby," said she, "and settle with you very soon."

"I hope you will, I'm sure, miss," said the landlady closing the door behind her with a jar that set every vein in Leona's frame a quiver. She sat there in the shabby room all the afternoon, crying quietly to herself, thinking,

with her aching head resting upon her hands, of the past and the present. And then she put on her bonnet, and went to the little red-brick house where her father had died, two years ago.

Mrs. Lynton was sitting in the red glow of the firelight, knitting away as if she had never left off all those months of Leona's absence.

"Child," cried she, as the tall figure glided across the floor and stood in front of her, "is it you?"

"Yes, Mrs. Lynton, it is I," said Leona. "I've come back to tell you I am sorry that I ever acted so foolishly, I've come back to say that I will be Felix's wife, if he will overlook the past."

Old Mrs. Lynton began to wring her hands in dire dismay.

"Oh, Leona," said she, "you are too late. Felix was married last week. We tried our best to get your address, but you had moved away from the last place, but left no clue behind. Zoe was heartbroken about it, but there was no help. Yes, he was married last week, and they have gone to Philadelphia for their wedding trip. And I do believe my poor boy is happy at last."

Leona stood pale and silent as a statue of marble.

"But whom did he marry?" asked she.

"Didn't I tell you, child? Why Zoe, of course."

Felix Lynton and his young wife are as happy as if there was no such thing as trouble in the world. So is old Mrs. Lynton. And Leona is supporting herself by giving lessons in music and doing whatever jobs of plain needlework she can obtain.

"Pride must have a fall," says the proverb, and Leona Bracebridge is one of its living illustrations.

BRYANT'S TEMPERATE HABITS.—The late William Cullen Bryant used to ascribe the preservation of his physical and mental vigor partly to his simple and regular habits of life. He would rise about half-past five in the morning (summer time half an hour earlier), and go through a series of light exercises before dressing. Light dumb-bells, covered with flannel, a pole, or the horizontal bar were enough to practice with. Sometimes he would swing a light chair around his head. An hour later he would bathe from head to foot. His breakfast was the simplest—"hominy and milk," as he himself said in a letter to a friend; "or, in place of hominy, brown bread or oatmeal or wheaten grits, and in the season, baked sweet apples."

"Buckwheat cakes," he added, "I do not decline, nor any other article of vegetable food; but animal food I never take at breakfast. Tea and coffee I never touch at any time. Sometimes I take a cup of chocolate, which has no narcotic effect and agrees with me very well. At breakfast I often take fruit, either in its natural state or freshly stewed. In the country I dine early, and it is only at that meal that I take either meat or fish; and of these but a moderate quantity, making my dinner mostly of vegetables. At the meal which is called tea I take only a little bread and butter, with fruit, if it be on the table. My drink is water; yet I sometimes, though rarely, take a glass of wine. I am a natural temperance man, finding myself rather confused than exhilarated by wine. I never meddle with tobacco, except to quarrel with its use." When in town, Mr. Bryant always walked to his office, six miles, down and up, no matter what the weather. His bed-time was 10, or earlier. He never took any kind of drug as a stimulant, not even the usual condiments with his food, such as pepper and the like. For many years he avoided every kind of literary occupation in the evening, doing all his work in the day-time.

NEW VOLCANO IN PERU.—A Peruvian newspaper, the *Bolsa*, says that extraordinary phenomena have been observed in connection with the "Corpuna" volcano in the Province of Castilla, which have caused great alarm among the population. The immense banks of snow which have crowned its summit from time immemorial have suddenly melted away with such rapidity as to cause torrents to rush down the sides of the mountain, washing out immense quantities of stones and earth. The river below, being unable to contain the great body of water so suddenly added to it, overflowed its banks, causing great damage and distress. A great chasm or lateral crater next opened on one side, throwing out volumes of smoke and steam as well as tongues of flame, which were distinctly visible at night, accompanied with loud subterranean rumblings. It had never been supposed that Corpuna was or could be a volcano, and there is no tradition that it was ever in a state of eruption. Nor within the memory of man has its crown of snow ever been absent.

SAVING LIFE AT SEA.—The Council of the Society of Arts offers its gold medal for the best means of saving life at sea, when a vessel has to be abandoned suddenly, say with only five minutes' warning; the shore or other vessels being in sight. Appliances intended for the competition must be sent in not later than the 31st of October, 1878, addressed to the Secretary, Society of Arts, John Street, Adelphi, London, W. C., and must in every case be accompanied by a short description.

BRYANT.—The September *Wide Awake* will be notable for an illustrated paper in its Poets' Home Series relative to the late William Cullen Bryant.

How Peter Bennet won his Case in Court.

A correspondent of the New York *World* has the following respecting one of A. H. Stephens' experiences as a lawyer in Georgia in the antebellum days:

A doctor named Royston had sued Peter Bennet for his bill, long over-due, for attending the wife of the latter. Alex. H. Stephens was on the Bennet side, Robert Toombs, then Senator of the United States, was for Dr. Royston. The Doctor proved his number of visits, their value according to local customs, and his own authority to do medical practice. Mr. Stephens told his client that the physician had made out his case, and as there was nothing wherewith to rebut or offset the claim, the only thing left to do was to pay it. "No," said Peter; "I hired you to speak on my case and now speak."

Mr. Stephens told him there was nothing to say; he had looked on to see if it was made out, and it was.

Peter was obstinate, and at last Mr. Stephens told him to make a speech himself, if he thought one could be made.

"I will," said Peter Bennet, "if Bobby Toombs won't be too hard on me."

Senator Toombs promised, and Peter began: "Gentlemen of the Jury—You and I are plain farmers, and if we don't stick together these ere lawyers and doctors will get the advantage of us. I ain't no lawyer nor doctor, and I ain't no objections to them in their proper place; but they ain't farmers, gentlemen of the jury."

"Now, this man Royston was a new doctor, and I went for him for to come an' doctor my wife's sore leg. And he come and put some salve truck on it and some rags, but never done it one bit of good, gentlemen of the jury. I don't believe he is no doctor, no way. There is doctors as is doctors, sure enough, but this man don't earn his money; and if you send for him, as Mrs. Sarah Atkinson did, for a negro boy as was worth \$1,000, he just killed him and wants pay for it."

"I don't," thundered the doctor.

"Did you cure him?" asked Peter with the slow accent of a judge with a black cap on.

The Doctor was silent, and Peter proceeded: "As I was sayin', gentlemen of the jury, we farmers, when we sell our cotton, has got to give valley for the money we ask, and doctors ain't none too good to be put to the same rule. And I don't believe this Sam Royston is no doctor, no how."

The physician again put in his oar with "Look at my diploma, if you think I am no doctor."

"His diploma!" exclaimed the new-fledged orator, with great contempt. "His diploma! Gentlemen, that is a big word for printed sheepskin, and it didn't make no doctor of the sheep as first wore it, nor does it of the man that now carries it. A good newspaper has more in it, and I put out to you that he ain't no doctor at all."

The man of medicine was now in a fury, and screamed out: "Ask my patients if I am not a doctor?"

"I asked my wife," retorted Peter, "an' she said as bow she thought you wasn't."

"Ask my other patients," said Dr. Royston. This seemed to be the straw that broke the camel's back, for Peter replied with look and tone of unutterable sadness: "That is a hard sayin', gentlemen of the jury, and one as requires me to die or to have power as I've hearn tell ceased to be exercised since the Apostles. Does he expect me to bring the Angel Gabriel down to toot his horn before his time and cry aloud, 'Awake, ye dead, and tell this court and jury your opinion of Royston's practice?' Am I to go to the lonely churchyard, and rap on the silent tomb, and say to um as is at last at rest from physic and doctor's bills, 'Get up here, yon, and state if you did a natural death, or was hurried away by some doctor?' He says, ask his patients, and gentlemen of the jury, they are all dead! Where is Mrs. Beazley's man, Sam? Go ask the worms in the graveyard where he lies. Mr. Peak's woman, Sarah, was attended by him, and her funeral was appointed and he had the corpse ready. Where is that likely Bill as belonged to Mr. Mitchell? Now in glory a-expressin' his opinion of Royston's doctrin'. Where is that baby gal of Harry Stephens? She are where doctors cease from troubling and the infants are at rest."

"Gentlemen of the jury, he has et chicken enough at my house to pay for his salve, and I furnished the rags, and I don't suppose he charges for makin' of her worse, even if he don't pretend to charge for curin' of her, and I am humbly thankful that he gave her nothing for her in'ards as he did his other patients, for somethin' made um all die mighty sudden—"

Here the applause made the speaker sit down in great confusion, and, in spite of a logical restatement of the case by Senator Toombs, the Doctor lost and Peter Bennet won.

RELATION OF BRAIN WEIGHT TO MENTAL ABILITY.—Mr. C. Clapham says, in the last volume of the West Riding Lunatic Asylum reports: "My observations agree with those of Wagner, that weight of brain does not indicate any close relation to intellectual power, and also that aboriginal races are not to be distinguished for smallness of brains. In fact, the ancient Britons, and I may add the ancient Gauls also, were remarkable for good sized, nay even large brains." This statement is borne out by the testimony of the most competent craniologists of the day.

Infants' Clothing.

High-necked and long-sleeved dresses are at present most used for infants, but it is predicted at the furnishing houses that there will be a revival of the low-necked waists with short sleeves. The latter, however, require extra saques of soft wool for warmth, and the babe is apt to take cold from the changes of these wraps, hence most mothers will adhere to the safer dresses now used. Day dresses are made with yokes either pointed or rounded, and the latest fancy is for square yokes made up of lengthwise clusters of fine tucks separated by bands of insertion, or else the whole yoke is made of Valenciennes insertion marked off in medallions with applique embroidery; a trimming similar to the yoke forms a deep border around the skirt. Few dresses, even the handsomest christening robes, are trimmed up the front. Fine French nainsook is used for the nicest robes, and the heavier English nainsook for plainer dresses. The dress measures a yard and a quarter in length, and consists of two widths of the muslin sloped toward the top. For night-slips soft-finished cambrics of domestic brands are used, also hair-striped and checked muslins, while some mothers use heavier qualities of domestic cotton. These slips have no yoke, are buttoned behind, have a belt in front only, with long hemmed strings to tie behind. They may have a cluster of small tucks down the middle of the front, with tucks above a deep hem, and are then nice enough to serve as plain dresses for day wear. An edging of Valenciennes or of fine Smyrna lace, a fluted ruffle, or an edging of needlework that has no sharp points to touch the tender flesh, is put around the neck and wrists. For petticoats, American cambrics with soft finish are used. These have a straight doubled band of muslin for the waist, with two long widths for the skirt; a deep hem headed by fine tucks is a neat finish; handsomer skirts have two or three bands of Hamburg insertion separated by clusters of tucks, and an edge to match; very wide embroideries are not liked on these garments. Flannel skirts are similarly shaped, and are usually of light qualities of gauze flannel. The plainest have a deep hem headed by chain-stitching or feather-stitching done in silk floss. The side seams of the skirt are also feather-stitched up the outside. The waistbands are of linen doubled. Embroidered vines and clover-leaf scallops trim more expensive skirts. The flannel barrow coats or pinning blankets, are merely a straight yard of flannel hemmed on three sides, while the fourth side, which is the top, is sewed to a broad band large enough to lap around the body. The pretty little shirts are made of linen lawn, and may have a revers turned over at the top, or be plainly edged with Valenciennes or with needlework, or if more elaborate shirts are needed, the entire sleeves and upper parts are made of Valenciennes insertion dotted with roses of applique needlework.—*Harper's Bazar*.

INFLAMMABLE DRESS GOODS.—Steam-Boiler Inspector Siebdrath, of Dresden, we learn from the *Polytechnic Review*, was led by several distressing accidents that happened to female operatives in factories, from the catching fire of their dresses, to experiment to find a simple plan of rendering such dress goods unflammmable. He tried alum, but with little satisfaction, as the goods so treated burned afterward with more or less readiness. They were likewise injured in appearance. A 5% solution of phosphate of ammonia, however, gave very satisfactory results; the goods (linen and cotton) after treatment refusing to inflame—simply charring when brought in contact with flame. Treatment with a mixed solution of 5% alum and 5% phosphate of ammonia, gave equally satisfactory results. Even when gunpowder was rubbed into goods thus treated, they simply charred and the powder simply puffed. He suggests that female operatives exposed to danger from fire should have their working dresses impregnated and rendered unflammmable by the plan above described. The dress could be used a considerable time without requiring to be washed, and hence the cost of reimpregnation (about 50 cents) would not prove a serious item.

A DINING ROOM CLOCK.—There was recently received at the Milan exposition a great curiosity in the shape of a clock made entirely of bread. The maker is a Peruvian, a native Indian, and he has devoted three years of his life to the construction of this curiosity. He was very poor, and being without means to purchase the necessary metal deprived himself regularly of a portion of his daily bread, which he devoted to the construction of this curiosity, eating the crust and saving the soft part for his work. He made use of a certain salt to solidify his material, and when the various pieces were dry they were perfectly hard and insoluble in water. The clock is of respectable size, and goes perfectly well. The case, which is also of hardened bread, displays great talent, both in design and execution, and taken altogether it would be difficult to find a greater curiosity.

HUMAN TEMPERATURE IN THE TROPICS.—We learn from the *Medical Times and Gazette* that Surgeon Major Johnston has made an extensive series of observations in India, on the subject of the normal temperature of the body in the tropics, and has found that, contrary to the general opinion, it is rather lower than the average temperature in the north. In one series of observations he found the mean axillary temperature to be 97.63°, and in another, 97.74°.

Young Folks' Column.

An Angry Baby.

No human being who saw that sight
But felt a shudder of pale affright.
He sat in a window three stories high—
A little baby; with no one nigh.

A stranger saw him, and stopped to stare;
A crowd soon gathered to watch him there;
A gleam! a flutter!—in airy flight
Came past the window, a butterfly bright!

From fields of clover and perfumed air,
Wayfaring insect, what brought you there?
The baby saw it, and eagerly
Reached out to catch it with glowing glee—

With fat, pink fingers reached out and—fell!
The awful horror no tongue can tell!
Poor little baby, so sweet and bright!
Pale faces quivered, and lips grew white;

Weak women fainted; strong men grew weak;
Up rose one woman's heart-piercing shriek.
Hurrah for the awning! Upon the fly
It caught the youngster and tossed him high.

The hound prodigious made baby scowl;
He caught his breath, sir, and sent up a howl.
All blessed the awning that had no flaw—
But a madder baby you never saw!

A Birthday Chocolate Cake.

DEAR WILLIE:

One cup of butter melted with a wish,
Two cups of sugar sifted through a kiss,
Three cups of flour to make it solid stand,
And four eggs beaten with a firm but gentle hand.
The little bit of lemon, we will call the spice of life,
The chocolate running through it may be marks of war
and strife,
But the whole is crusted over with an icing pure and sweet,
As will be your life among us if you let God guide your feet.

Then please accept this cake with love,
About it is no fraud,
But earnest wishes for your health,
Yours truly, MAUD.
St. Helena, Cal.

A PRETTY INCIDENT.—The *New York Evening Post* had recently an incident proving that cats and dogs are not always antagonistic, which called forth a companion case from one of its correspondents. The writer says: I am reminded of something of the sort that came beneath my observation some years ago. A small curly black dog that we called "Jip," became wonderfully attached to a miserable black and white kitten—the least of the litter—and so great was their regard for each other that where one was, there the other was sure to be. We gave the kitten to a neighbor, whereupon Jip refused food for days, and actually moped till she became a mere shadow. To save her life I went after the kitten, which I found in the same ghostly condition, and never, never shall that scene of meeting be effaced from the memory of those that witnessed it. They rushed—or rather crawled into each other's embrace and gave many signs of joy. A good square meal and a long nap followed the reunion. In after years, however, as the kitten grew, this mutual affection was lessened to a great extent, although they always treated each other with great respect.

SHE SAW.—A tacky sort of a boy stood in front of a house on Sprout street yesterday for a full quarter of an hour, gently rubbing his sore heel against the fence-pickets and thinking deeply; but there was a well-counterfeited look of alarm on his face as his vigorous pull at the bell got the woman of the house to the door. "What is it?" she asked as she looked this way and that and danced around.

"Pull down your windows—bolt yer doors—yard all full of lions!" he replied as he skipped for the gate.

She uttered a little scream and disappeared, and for half an hour that house was as tightly closed as a postoffice box on the upper tier. Then the woman cautiously put her head out, gazed around, grew bolder, and finally appeared in the front yard. She looked about her, her chin trembling a little, but by degrees a peculiar look stole over her face.

"Yes—um—I see?" she snapped as she turned to go in. "The boy saw those tiger-lilies and played a game on me. Um—I see!" She never thought of dandelions.

WHAT NEDDY REMEMBERED.—I knew a blessed lady to whom God had sent no children; so she took five orphan little ones as her own. At her death they were scattered in new homes, and Neddy, six years old, came to bid me good-bye. "A good many things mother taught me I s'pose I'll forget," said he. "I'm so little. But one thing I shall remember." "What is it, Neddy?" "She told me 'fore I 'lowed myself to think of anybody's badness, to stop and think real hard to see if I didn't have some badness, too."

"You boys ought to be very kind to your little sister," said a moralist. "I once knew a little boy who struck his sister a blow over the eye. Although she didn't slowly pine away and die in the early summer time, when the June roses were blowing, with words of sweet forgiveness on her pallid lips, she rose up and hit him over the head with the rolling-pin, so that he couldn't go to Sunday-school for more than a month, on account of not being able to put his best hat on."

A LITTLE boy went to his father crying, and told him that he had kicked a bee that had a splinter in its tail.

GOOD HEALTH.

Hints to Nervous Invalids.

Dr. Holbrook, in the *Herald of Health*, gives the following advice: Take plenty of sleep. Eight or nine hours each night will be better than less. But this is the chief difficulty; if you are nervous you cannot sleep; and a good night's sleep is both the cause and effect of coming recovery. When your sleep departs you are sick; when it returns you are well. So that hints to nervous invalids simply resolve themselves into rules for getting sleep. I give you mine, which has been burnt into me by a long experience.

1. Take not less than two hours of physical exercise each day, and in the open air if possible. Work of some kind is better than gymnastics, but swinging dumb-bells or Indian clubs is better than nothing. Useful labor I believe to be far the best, since the mind as well as the body has something to do with sleep and health. It is said that Lyman Beecher used to keep a pile of sand in his cellar and shovel it for exercise. Doubtless it was better than nothing; but for me let it be work, with hoe or spade, or ax or saw, or broom or flatiron, or washtub or kneading-trough, or something that does somebody some good. If you are too rich or too busy, or your time is too precious for you to do any of these things, or if you are so elegant, refined and fashionable that you are afraid of losing caste and soiling your white hands, then know that you are probably too refined and too lazy ever to have the best sleep and health. Excursions and travel may do you good, but never what some manual labor would do. God has made a law about "the sweat of the face," and no mortal can dodge it. The banker and the beggar, the queen and the maid-servant are alike subject to it.

2. Do not overwork the brain. Reading, writing, the hard study of books, and continued thought without any books, are all of them very healthful in moderation. But a little excess in any of these things will overtax your nerves and brain and drive away your sleep. Going to parties, making and receiving calls are all subject to the same law. If you see company and talk more than you ought to, you will not sleep.

3. Avoid all mental labor at night. If you are very feeble you may have to stop reading and writing, and stop seeing company and holding conversation as soon as the sun goes down—possibly before—and devote yourself to the sole business of keeping quiet. It may aid you to record in your diary the number of hours each day that you devote to manual and mental labor and to company, and the result of each day's work upon your health, until you have learned how much of each you can do without driving away your sleep.

4. When preparing to retire, warm your feet, with a hot bath it may be, and let your head cool. Warm your back, the naked skin; heat it between the shoulders—with a firebrand or some other way—as hot as you can endure it, but be careful not to heat the back of your head. If necessary, ask your physician for a counter-irritant, of croton oil or something, and rub it up and down the spine, especially between the shoulders, until it brings out an eruption. It will draw the blood from the head and greatly relieve you. A vigorous rubbing of the back by an attendant will help greatly. But do not let the attendant talk too much. Even the glare of the lamp drives away sleep. So put it out, and you will get drowsy sooner. The light of a great fire will be enough.

BRAIN-FEEDING.—The *London Lancet* is glad to find some small tokens that the need of "brain-feeding" is beginning to be recognized by the lay public. For example, it is at length perceived that to perform intellectual work thoroughly men must be supplied with fresh air. This scrap of wisdom has been excogitated in connection with the controversy about the ventilation of courts of justice. It is not unreasonable to anticipate that in process of time it may dawn on the consciousness of ordinary thinkers that just as muscle is fed and trained for physical exercise, so brain needs to be prepared and sustained in mind-work. The press of work and the strain of worry are so great in these days of hot haste and breathless enterprise that, except under conditions rarely established and maintained, the power of self-nourishment and repair in the mind-organ is not sufficiently strong to keep it in health. It follows that it must be fed and nourished by special design. An adequate supply of oxygen is the preliminary requirement. Then comes the question of food; and, whatever else may feed the brain, workers with this organ should be assured that alcohol will not sustain it. Alcoholism and oxygenation are directly antagonistic processes; and even if alcohol be food for the brain, the organ cannot feed when the nutrient fluid circulating in its vessels is disabled from the task of conveying oxygen, which happens whenever spirit is present in more than very moderate proportions in the blood. The relief afforded by alcohol from the sense of depression procured by a sack of oxygen, is, therefore illusory. It is produced by over stimulating an organ which is both exhausted and impaired.

DOMESTIC ECONOMY.

Golden Coffee and Strawberry Short-Cake.

EDITORS PRESS:—For two persons, take four heaping teaspoons ground coffee, tie up in a piece of Swiss muslin (leave room for expansion), pour on one pint boiling water, cover close and set on back of stove ten minutes. Beat one egg with dover egg beater thoroughly, divide it into two coffee cups, add the usual quantity sugar for each. Hold the coffee urn high up, pour the boiling coffee on the egg, add the warm milk, and, with the golden foam standing above the rim of the cup, you have a pretty picture to look at, and will think you never knew how good coffee could taste before.

Tiptop Strawberry Short-Cake.

One egg beaten, one large cup sweet milk, one heaping tablespoon sugar, one teaspoon salt, two teaspoons even full cream tartar in the flour, one even teaspoon soda dissolved in one-half cup boiling water, stir briskly to a thin batter, bake on round griddles size of dinner plate, spread each cake with butter and sugar and mashed berries as fast as cooked, and add bits of jelly with the berries if handy. This cake, with a cup of the "golden coffee" accompanying this recipe, will keep some woman or women busy during the berry season. Don't attempt it unless you can cook old-fashioned slap jacks properly. It's such a pity to spoil good things. G. F. C.

Sunshine Cottage, Santa Barbara.

Roast Beef with Yorkshire Pudding.

Our memories of our boyhood are fragrant with the aroma of roast beef and Yorkshire pudding. We are glad to see a printed formula for securing what to us exists only in memory. Clara Francis, writing to the *Prairie Farmer*, gives the following instructions:

If you use an oven for roasting, place the beef in a dripping pan with one tablespoonful of water, and set it in a very hot oven; in 10 minutes let the heat go down a little, but keep a good steady fire. Baste the meat often with its own drippings, and allow from 10 to 15 minutes for each pound. An hour before it is done, sprinkle well with salt and pepper, and surround it with peeled potatoes which must be also well basted, and turned in cooking so that all sides may be browned alike. Remove the beef when done to a hot platter, and lay the potatoes around it. Many prefer the gravy which runs from the meat, but if a made gravy is wished, turn nearly all the drippings from the pan, and pour into it half a pint of boiling water; stir in a teaspoonful of corn-starch dissolved in a teaspoonful of cold water; season to taste with salt and pepper, and when it boils up once, pour through the gravy-strainer into a gravy-boat.

Roast Beef with Yorkshire Pudding.

Three-quarters of an hour before the beef is done, pour nearly all the drippings from the pan, then place the meat on a small wire trivet, or, lacking this, put it on a wire grating or even a few sticks across the top of the pan. Pour the pudding into the pan, and return all to the oven; the drippings from the meat will fall on the pudding and season it. When they are done, place the meat in the middle of a platter, and lay the pudding—cut in pieces—around it. If preferred, the latter may be baked in a separate pan, and served around the meat in the same manner.

For the pudding.—To a pint of sifted flour add a teaspoonful of salt, and half a pint of milk; add the beaten yolks of four eggs, then another half pint of milk. Lastly put in the whites of the four eggs beaten to a stiff froth. Beat well together just before putting into the oven, and bake three-quarters of an hour.

BROCOLI WITH WHITE SAUCE.—Pick out all the green leaves from a couple of brocoli, and cut off the stalks close. Put them head downwards into a saucepan full of boiling salted water. When done, pick them out into strigs, and arrange them downwards in a pudding basin, which must have been made quite hot. Press them in gently, then turn them out dexterously on a dish, and pour over them the following sauce, boiling hot: Melt one and one-half ounces of butter in a saucepan, mix with it a tablespoonful of flour, and then add half a pint of boiling water; stir till it thickens; add salt and white pepper to taste; then take the saucepan off the fire and stir in the yolks of two eggs beaten up with the juice of a lemon and strained.

CALF'S HEART.—Calf's heart if well cooked, is a very cheap as well as palatable dish. Do not soak it in water, but merely wash it well, then fill with a stuffing the same as for turkeys. Cover the open end with a buttered paper, and put it to cook in a small dripping pan. Lay over it a slice or two of salt pork; pour a little boiling water in the pan, but baste very often. When partly done, sprinkle well with salt and pepper and baste once or twice with melted butter. It will require about two hour's cooking, and must not be allowed to dry or burn. Make a nice brown gravy with the drippings that remain in the pan, and serve the heart very hot, with boiled onions as an accompaniment.



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SAN FRANCISCO:
Saturday, July 13, 1878.

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The Week.

The harvest area now embraces the bay counties, and the dense smoke of the threshing engine can be seen, with now and then a jet of feathery steam as the "portable" salutes his big brother, the locomotive, and, with his own feet in the stocks, envies the locomotive's flight toward the horizon. Thus has it always been: the youngster doomed to pick up chips in the farm yard, while the elder, pride of the family, with budding hopes of manhood, hooks on to the best buggy and rides away into the illimitable with Nancy, the neighbor's daughter. Never mind, little down-trodden one, your time will come.

Now that the fields come to the test of the reaper, it is seen that nearly everywhere there is severe damage from rust. From the severe visitation in the Salinas valley, the evil extends north and south and eastwards, making some fields wholly unworthy of the harvester, and in others leaving naught but small weights of shrunk and shriveled grain. Sad indeed will be the consequences to many an honest worker, who, surviving the drouth last year, put all his labor, his cash, his credit, and his hopes into this year's promise of plenty, and will hardly reap enough to nourish his family through the year. Such instances always awaken in us feelings of the deepest sympathy, and prompt us to ask for all such unfortunate ones the substantial aid and encouragement of more fortunate neighbors. Do all you can to put these trembling ones upon their feet again.

The week has brought to Europe assurance of an enduring peace, and Britain has said hush to the noisy death-makers in her arsenals. But while the ensanguined demon of war is couched in Europe, he rears his head in our Northwest country. In Idaho and eastern Oregon the dread scenes of Indian warfare are being enacted. The fierce red men are met by the regulars and by companies of brave volunteers, but their cruel deeds are not yet stayed. Eastern congressmen in their secure homes have to answer for crippling the army until the brave frontiersmen are almost at the mercy of the savages. They have been guilty of a sad mistake.

Increasing the Demand for Dairy Products.

The foreign demand for American dairy products has furnished the opportunity for the marvelous growth of the dairy interest in the Eastern States during the last 20 years. The consumption of cheese, particularly in this country, would warrant but a small part of the investment of labor and capital which the manufacture now receives. The field for the consumption of surplus American dairy products, as well as grain products, lie across the water. Our Eastern dairy friends have in England just the hungry and persistent consumer which they require. The Eastern States have now in possession what we greatly need, a profitable field for large exports. If we could secure on the eastern coast of Asia, a market like that they have on the western coast of Europe, California might increase her dairy interest 100-fold and enrich her citizens with the results of profitable production. No one can say that this is not possible. No one can deny that, at some time in the future, cargoes of Pacific coast dairy produce may take steam for China and Japan, as they now take steam westward from New York city. But, though this is within the region of possibilities, it will not do, of course, to take steps toward manufacturing for such a prospect until the demand calls for the goods. The thing which it is wise to do, and which should by all means be done, is to set at work such agencies as we may command toward creating such a demand, by endeavoring to win Asiatic consumers to an article of food desirable as good American cheese is acknowledged to be.

There are perhaps several ways by which this missionary work for our cheese could be promoted. We would speak especially of one movement which is now being undertaken in the interest of Eastern producers, but in which we should enjoy a share. Ex-Governor Horatio Seymour, of New York, is one of the most zealous and able of the promoters of the dairy interests in this country. Some time since the State Department at Washington sent circulars to our representatives abroad, to make inquiries about the best way of getting American products into the markets of different countries. The answers returned were of interest and value. Mr. Seymour noticed that none of them related to the products of the dairy. Therefore, in behalf of a large class of farmers in the Northern States, Mr. Seymour wrote to Mr. Evans and asked him to send out a similar circular, which would give the dairymen facts that might enlarge their markets. We can make butter and cheese at a lower price than any other people, for the cost of doing this turns upon the price of land rather than upon that of labor. As we have cheap and fertile lands, we can compete in these branches of industry with greater advantage than in any other kind of farming. But to do this we must know the tastes and habits of the people with whom we hope to deal. Mr. Seymour has not received an answer to this letter, but he trusts the department will aid the dairy, as it has other interests, by learning from our representatives all the facts about the demands for cheese and the kind best fitted for different markets. As this is one of the largest articles of export, it concerns not only a great body of our farmers, but the financial condition of our whole country, that we should be able to increase its production and sale.

The Department of State could do good service for this coast, if it would push the inquiry which Governor Seymour suggests. We are shipping some cheese to Asiatic ports. Our representatives at these ports could ascertain whether these supplies are wholly taken for foreigners residing there or whether they are gaining introduction into the diet of the natives. They could determine whether the natives are able to purchase such food at the rates for which we can furnish it, and whether there are articles in their diet for which cheese can be substituted, as it is for meat in other thickly settled countries, where meat is of necessity high priced. Nor is the Asiatic coast the only region from which we should like to have facts bearing upon this subject. There might be points on the southern stretch of this coast and the western coast of South America, where certain amounts could be profitably placed. We do not expect the Department of State to market the great surplus of dairy products which we could manufacture, but it could wisely ascertain for us the primal facts of the tastes and the habits of the people who touch the great circle of our ocean and whom we could easily reach from our ports.

It is quite clear that to make profitable extension of our dairy industry on this coast, we must have an outlet for export of the product. Nor is the need less urgent in our fruit-growing industry. This should largely enjoy the field opened by foreign shipments. Quite a business is now done in this line, and California canned fruits have won their way in Asia, Europe and Oceania, as well as in remote parts of America. But this movement could be increased a hundred fold by due effort in opening new markets in different parts of the world. This, as well as the dairy, deserves the attention of the State department, and our consuls and accredited agents in other countries could well be instructed to examine the question in their different localities.

It has been truly observed that no country in

the world has the qualities for successful agricultural production so marked as our own. We have abundant land, labor and unsurpassed mechanical appliances for it. What we need is a vigorous pushing of the surplus product to every corner of the world, and the government cannot serve the country better than by giving constant and vigilant attention to aid individual producers by securing for them knowledge of facts and tendencies, which are beyond individual investigation. We know there is good work now being done by the State department in this direction. Let it be extended.

The Fair Season.

The following is a partial list of the coming fairs. We shall be pleased to add to it if readers will send us the dates and locations of their respective exhibitions:

San Francisco Mechanics' Institute, San Francisco, August 13th to September 14th.
California State Agricultural Society, September 16th to 21st, inclusive.
Oregon State fair, at Salem, October 8th to 18th, inclusive.
Nevada State Agricultural, Mining and Mechanical fair, at Reno, October 7th to 12th, inclusive.
Montana Agricultural, Mineral and Mechanical fair, at Helena, September 23d to 29th, inclusive.
Sonoma and Marin district fair, at Petaluma, September 23d to 25th, inclusive.
San Joaquin valley district fair, at Stockton, September 24th to 28th, inclusive.
Northern district fair, at Marysville, September 23d to 25th, inclusive.
Golden Gate district fair, at Oakland, September 9th to 16th, inclusive.
Napa and Solano district fair, at Vallejo, September 3d.
Monterey county district fair, at Salinas City, October 15th to 19th, inclusive.
Siskiyou county fair, at Yreka, October 2d to 5th, inclusive.
El Dorado county fair, at Placerville, September 13th to 15th, inclusive.
Santa Clara valley fair, at San Jose, September 30th to October 5th, inclusive.
Stanislaus County Stock Growers Fair, at Modesto, October 9th to 11 h inclusive.
Southern California Horticultural fair, at Los Angeles, October 14th to October 19th, inclusive.
Southern California Agricultural Society's Fair, at Los Angeles, October 14th to October 19th, inclusive.

STEAM PLOWING TREACHEROUS LANDS.—Steam plowing outfits were brought to this port last summer to use on tule lands, and there was a proposition before Congress to admit them free of duty for experimental purposes, as our readers will remember. Whether this bill prevailed or not we are not sure, but we fear not. However it is of interest to note that steam arrangements are being used in England upon lands which will not admit the passage of heavy plowing teams because it does not give them a safe foothold. In England such lands are plowed by steam engines drawing plows by wire cables. One case is noted in Wales where the surroundings of the locality were so treacherous and difficult that the engine had to be placed some 700 or 800 yards distant from the land cultivated; indeed, before the aid of steam was called in, the attempt to do the work by horses was not only dangerous, but impracticable. With the aid however of steam the difficulties of the work were all overcome, and it may now be said that this great scheme has become a remarkable success; for, where but three years ago all was a watery waste, this year there are hundreds of acres of promising grain crops.

LIMING LAND FOR SORREL.—A writer in the *Country Gentleman* wishes to know "whether sorrel prevails in any of the Western States and if any portions are exempt, what is the mineral character of the land, or what their recent treatment?" We cannot say how widely the evil exists in this State, but we know that some of our best coast dairy pastures are becoming very foul with this noxious growth. We are not aware that any remedy has been tried except cultivation and seeding with fresh grasses. The Eastern writer finds that liming the land is a remedy in Pennsylvania. He says that "through the whole country from the Susquehanna to the Delaware, viewed a month ago, we might detect the absence of any recent application of lime by the appearance of sorrel in the grass fields. It may be that the principles that appear to obtain here, with respect to the antagonism of sorrel and lime, will not be sustained in the experience of farmers in other States." Will our readers tell us whether they have tried lime and with what effect? If lime is a sovereign cure, it would be well to know and practice it for the sorrel comes in on lands difficult to cultivate, sometimes, and yet valuable for their natural pasturage. What is experience on this point?

NATIONAL AGRICULTURAL CONGRESS.—We receive from Jonathan Periam, Secretary, an announcement of the assembling of the National Agricultural Congress in New Haven, Conn., August 17th. The object of the association is "the collection and dissemination of information in relation to agriculture in the several States and Territories, and concerning the climatic, economical, and other conditions affecting its progress and prosperity." The society numbers among its members some of our leading practical agriculturists and scientific investigators of agricultural topics. We hope its numbers may be largely increased and its published translations widely disseminated. Hon. G. W. Colby, of Nord, Butte county, is Vice-President for California, and Prof. Hilgard is a member of the standing committee on "Agricultural Chemistry, Soils and Manures."

ON FILE.—"Loss and Gain," F. F.; "Pruning," M. P. O.; "Farm Notes," J. W. A. W.

QUERIES AND REPLIES.

Insects on Cucumber and Squash Vines.

EDITORS PRESS:—Can you tell me through the RURAL PRESS what will keep the bugs from eating up our cucumbers, melons and squash vines? By doing so you will confer a great favor.—J. B. TRITS, Davisville, Solano county, Cal.

There are several different insects which prey upon these vines. They generally do most harm when the vines are starting, and if they once get a good vigorous start they outgrow their enemies, which are short-lived and appear only for a short season. When the attack is chiefly made upon the first or seed leaves, the hills may be protected by surrounding the hill with a box with no top or bottom, but covered by glass or gauze. We know a large grower of cucumbers at the East who had several hundreds of these boxes in constant use. If the insects attack the vines when larger grown, this treatment is, of course, impossible. The best thing we know of is to stimulate the growth of the vines as much as possible by giving them water and then to powder the leaves with ashes, air-slaked lime or ground hellebore, the last named being a poison, but not dangerous when carefully used. These powders should be shaken from a sieve when the dew is on the leaves. If any of our readers have remedies which have served them well we should be pleased to know them.

Insects Boring Sycamore Wood.

EDITORS PRESS:—I read an article some time ago from your paper about insects working in wood, which has stirred me a little, and I am looking about for the worm or bug which is eating my wood. I had a stick of sycamore a foot or more through which had been cut about three years. It was sawed into stove wood, length about 18 inches, and both ends of the pieces resemble a wire sieve, being full of holes about as large around as a large pin head. Apparently the insects after remaining in their burrow for two or three minutes, come out, with all the sawdust they can carry, on the outside of the log. I could send you a pound of it to-day.—ERIE LOCKE, Pasadena, Los Angeles county.

Our correspondent sends with this note a little package of the insect "sawdust" or borings of which he speaks. We find no insects in the package, nor are we able from the debris to tell what manner of insect is doing the mischief in the wood. We hope he may catch some of the insects and send them to us. It is a well-known fact that some insects take to a diet and habitation in seasoned wood as well as enter and undergo transformations in the living tree. The dust or powder which we received is quite like that manufactured by the laurel borer. The insect may be similar to the laurel borer or quite different. The specimens will establish this point.

The Precocious Pumelo.

EDITORS PRESS:—The *Lusua nativa*, in the form of a Pumelo orange tree, in bloom at two months old, described and illustrated in the RURAL of June 29th, was a subject of much interest. It may not be generally known that such freaks of nature are not very rare with other varieties of the *citrus* family. Five years ago, a little plant in a seed bed on a ranch in Sonoma valley, showed a perfect blossom when four inches high and not more than two or three months old. The fruit did not set at that time nor has the tree shown any signs of blooming since. This plant was raised from seed of the common Los Angeles orange. In 1875, says the *Florida Agriculturist*, a shaddock, or grape fruit, in the grounds of D. L. Yulee, at Fernandina, Florida, six inches in height, bore a perfectly developed fruit, though of small size. Another plant on the same grounds, 10 inches high and only a few months old, produced fruit. Other instances of a similar character have been mentioned in this State, but we cannot now recall dates and places.—G. P. RIXFORD, San Francisco.

Plaster Casts.

EDITORS PRESS:—You will confer a favor by giving the address of some reliable dealer where good plaster casts of statuary are sold. I mean really good and beautiful pieces, suitable for parlor, library, hall, fernery or fountain. I can give your readers directions for preparing them waterproof for fountains and out-door use.—MRS. CHILDS, Santa Barbara.

Our city solicitor reports himself unable to find an established dealer in these goods. The making and selling is done by peripatetic Italians. Perhaps it would be well to give the directions for water-proofing, and then whenever any reader catches a plaster nymph sporting in his fountain, he will be all ready to preserve her from the wet.

The New Cattle Disease.

EDITORS PRESS:—I have seen a few cases of the new cattle disease. The only way to save them is take four bottles of claret wine, give it to them to drink and use a little turpentine on the head.—A. T., Old Creek, San Luis Obispo Co., Cal.

Chevalier Barley.

EDITORS PRESS:—Will you or some of your correspondents favor me with some information as to the yield and growth of Chevalier barley? I am told that it does not yield more than half as much as the ordinary barley and that it invariably lodges. Any information as to this barley will be gratefully received.—SUBSCRIBER, Los Angeles, Cal.

Chevalier barley has the reputation of being less vigorous than the common grain, both in strength of stem and in liability to rust. In some localities Chevalier has been nearly abandoned for the most part for these reasons. As for amount of yield, we are not able to make the comparison. Will readers furnish the information desired.

Life and Death of the Grasshopper.

The Government Entomological Commission, consisting of Profs. Riley, Thomas and Packard, has finished its immediate labors in investigating the destructive Rocky mountain locust. Their formal report will soon be issued as a volume of the Hayden survey reports and it will contain more accurate information concerning this insect scourge than has ever before been made known. The Commission has found that the species of locust which does the great injury in the Prairie States never crosses the Sierra Nevadas. We have on this coast species of our own, and, if the item which we give in our "Agricultural Notes" this week, concerning the finding of a six-inch grasshopper in the San Joaquin valley, be accurate, we have game in this line which the Government entomologists had better set their traps for.

From the forthcoming report, a forecast of which is furnished to the press, it will appear that the area in which the locust breeds each year, in greater or less numbers, the commission says, is approximately 300,000 square miles in extent. It is not to be inferred that the locust breeds continuously over the whole of this area each year, for it is to be understood that the locust within its native permanent habitat is essentially migratory in its habits. For a series of years it may deposit its eggs in a given river valley, in some park, or in some favorable area in some of the plains lying about the mountains, yet it may desert its customary breeding-grounds for adjoining regions, or cross a low range of mountains and breed in a more distant valley. Even in this area the true hatching-grounds are for the most part confined to the river bottoms or sunny slopes of uplands, or to the subalpine grassy areas among the mountains, rather than continuously over the more elevated, dry, bleak plains. The area in which the locust breeds lies mainly between longitude 102°, and 114° West of Greenwich, and latitude 53° and 40° North.

From this general breeding-ground the locust is distributed in all direction. The eastern limit of its range is marked by the commission by the following line: "From the southern end of Lake Winupeg, by way of Lake of the Woods to Pierce county, Wisconsin; thence directly south to Poweshick county, Iowa; then southwest to Worth county, Missouri; then south through Montgomery county Arkansas, to Houston, Texas, curving westward from this point to Live Oak county, Texas."

In Manitoba the eastern and also the northern limit corresponds very closely with the timber line. Generally the northernmost limit of distribution extends to Fort Pitt, in latitude 53° 40', and the northern limit of the range of *Caloptenus spretus*, which is the most troublesome species of the locust, extends nearly to the southern limits of the forests which lie partly upon the 53d parallel, but in a greater part between longitude 104° and 114° and above the projected route of the Canadian Pacific railroad. It is probable that other species range north of these limits, but it is not probable that the *spretus* ranges beyond the line of coniferous trees lying along the north shore of the northern branch of the Saskatchewan river. The extreme western limit of the distribution of these locusts is the eastern flank of the Cascade range in Oregon and Washington Territory, and the Sierra Nevada mountains, though in many parts of the country they do not reach a point so far west.

As to the southern limit, the commission lacked data for determining this line satisfactorily. All that its members are able to say in reference to it is that the locusts have been known to cross the Rio Grande at Eagle Pass, and to penetrate a mile and a half into Mexico; that they have been observed in western Texas as far as the settlements have been extended; that they have penetrated New Mexico on the northeast as far as Las Vegas and Fort Union, and they have passed down in the mountain region from Colorado to Taos, and possibly further south.

The report of the Commission will enumerate the different ways proposed for the destruction of the locust. The means to be employed, the Commission says, very naturally falls into five divisions; first, encouragement of natural agencies; secondly, destruction of the eggs; thirdly, destruction of the young or unfledged insects; fourthly, destruction of the mature or winged insects; fifthly, preventive measures. The means suggested for the destruction of the eggs are, first, harrowing in the autumn. This during dry, mild weather has been found to be one of the most effective modes of destroying the eggs and preventing further injury. The Commission suggests that it be enforced by law. A revolving harrow, or cultivator, is recommended for this work. The second method is by plowing, thus burying the eggs so far below the surface as to prevent their hatching. The third is irrigation. Where this is practiced and the ground is light and porous, prolonged and excessive moisture will cause most of the eggs to perish, and irrigation in the autumn has been found very beneficial. The fourth plan is tramping. Many of the eggs may be destroyed in pastures or fields where hogs, cattle, or horses can be confined, when

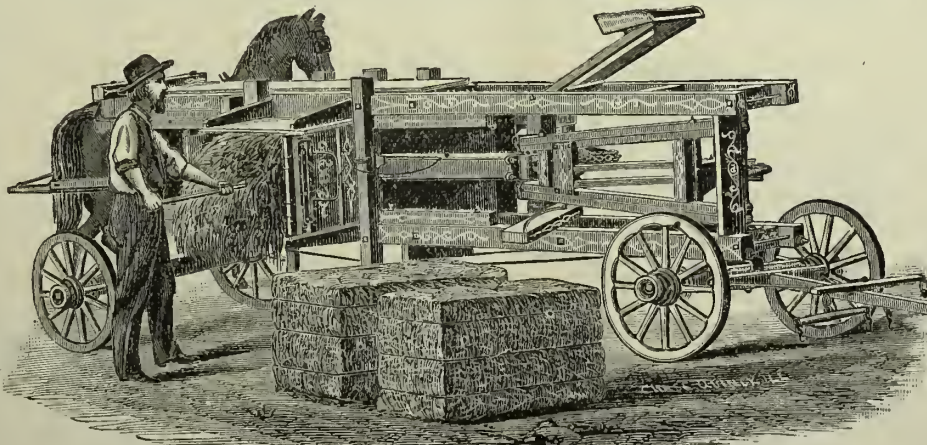
the ground is not frozen. The fifth is collecting. In cases where neither of the means already suggested are available, the Commission recommends the collection and destruction of the eggs, and suggests that the State authorities should offer some inducement for this work. Every bushel of eggs destroyed is equivalent to a hundred acres of corn saved.

The methods suggested for the destruction of the young or unfledged locusts are first, by burning, which may be done by scattering over or around the fields old straw or hay, in heaps, or winrows, into which the locusts, some time

WILD RICE OF THE NORTHWEST—(*Zizania Aquatica*).

after they hatch, may be driven and burned. Crushing can be done by means of various machines, but can only be advantageously accomplished where the ground is smooth and hard. The Commission describes a great number of crushing machines, and illustrates the subject by numerous engravings. Trapping can be done by the use of nets or seines of long strips of muslin, calico, or similar materials, made after the manner of quail nets. It is also accomplished by digging pits and holes and by the use of coal tar or coal oil in pans. These pans

John Franklin. The plant bears quite heavily, and the Indians gather it by bending the stems over a boat and beating it off. The grain is a fine feed for game, and has, we believe, been introduced for that purpose into some of the counties of this State. Captain Simpson has sent seed twice to Maine, believing that getting a good growth of wild rice in the ponds of the North East, would increase the number of wild game fowls. Both times the experiment has been unsuccessful, perhaps, as the Captain thinks, from some mistake in sowing,



THE ERTEL PORTABLE ONE-HORSE HAY PRESS.

are pushed over the fields, and as they disturb the locusts they jump into the tar oil and are thus destroyed.

As a means of protection against the ravages of the locusts, the Commission recommends diversified agriculture, legislation, the protection and encouragement of native locust-feeding birds, the introduction of foreign locust-feeding birds, inducements offered to the Indians to collect and destroy the eggs and young; the destroying of the eggs or young by making the greatest possible use, by artificial means, of the natural water supply; burning the young in the spring and diverting the winged swarms by smoke.

Growing Wild Rice.

We received some time ago from Captain Robert Simpson, 42 Market St., San Francisco, a little package of wild rice seed; the seed of the plant shown in the engraving on this page. The seed came from a pond in Wisconsin. It grows abundantly in the shallow water in different parts of North America and extends northward well toward the Arctic circle, as stated by Sir John Richardson in search of Sir

The Ertel Portable Press.

We present on this page an illustration of a portable hay press, invented by Mr. Geo. Ertel, of Quincy, Ill., who has for ten years been manufacturing the Ertel Beater Hay Press, which has a wide reputation. The public, however, demanded a press of less cost, one that could be operated with less force, that could be used in the field and moved from stack to stack without loss of time. The press can be hauled about by any common wagon team of two horses, and passes through gates where a common farm wagon can pass, and when drawn to a stack, is ready for work. Ten tons of hay pressed by it can be loaded in an ordinary box car. The size of the bales in the press is 18, 24 and 34 inches. They are very smooth and square, and will weigh from 200 to 250 pounds each. Sixty of these bales can be made in a day, and from 100 to 115 of the same can be loaded in almost any ordinary box car. The weight of the complete press, with axles, wheels, tongue, double-tree, tie-making machine, etc., is 3,200 pounds.

This press is worked in a horizontal position, resting on four wheels. The sweep or power is on the side of the press, whereby the levers are drawn in with a chain seven feet in length, which is fastened directly from the levers to the power, and is thus worked without the aid of a shieve or pulley, whereby all friction is avoided, being operated in this way:

One horse is hitched to the end of the sweep, and when going to the right, opens the press or levers; then the charge of hay is placed in the press by a door which locks itself as it is shut; while this is done the horse is moving round, pulling to the left, which motion closes the levers or press, bringing the pressure to bear; this operation also opens the feeding door without any further attention. As soon as the horse has reached the extreme end going to the left, he turns around, going the other way again to open the press, and the movement is so repeated until the bale is filled and pressed; then the doors are opened and the three hoops or ties put on; when the horse is started again, which motion runs the follower back, and as the bale is now entirely free it can easily be removed from the press. The doors are again closed, a charge of hay put in the press, and the horse again going right and left until the bale is again filled and pressed. One man, one boy and one horse can operate the press. Of course, two men with one boy and one horse are better and can press out 60 of these bales in 10 hours.

Inquiries on Beet Sugar Manufacture.

The last Legislature passed a joint resolution relative to the production and manufacture of sugar from beets and melons in this State, and requesting the Secretary of the Treasury to appoint Mr. G. Marsilliot, First Assistant Engineer United States Revenue Marine, as the most suitable person (he having given the subject most careful attention), to collect and compile statistics, conduct experiments, and report all information that can be obtained on the subject to the Hon. Secretary of the United States Treasury, through the Collector of Customs of the Port of San Francisco, to the Secretary of the Interior for publication in the Report of the Department of Agriculture; to the Governor of the State of California; to the State University and College of Agriculture at Berkeley, and to the California Agricultural Society at Sacramento, for the benefit of the public. The resolution was forwarded to Washington in due course, and in its support a petition has been sent to Secretary Sherman, signed by all the

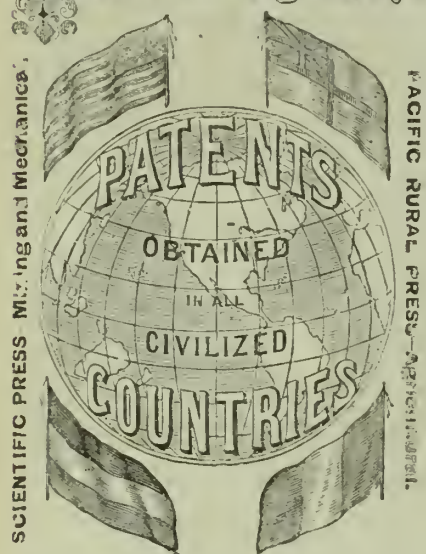
professors at the University, by State officers, capitalists, farmers, and others, setting forth that in view of the wide-spread anxiety of agriculturists, capitalists, and public generally throughout the country, to obtain accurate and reliable information in relation to the production and manufacture of indigenous sugars from beets and melons, the growing importance and derivable benefit of having the industry more generally understood and introduced, the fact that over 400,000 tons of foreign sugars are imported annually, which can and should be produced in our country, a Government officer be speedily instructed to collect, compile, conduct experiments, and report all information that can be obtained on the subject. The petitioners set forth that France in the years 1810 and 1812 offered a premium of 1,000,000 francs for the most successful method of obtaining a supply of indigenous sugar, and now continental Europe, notwithstanding the heavy taxes and competition with colonial cane sugar, is producing more than a home supply, amounting to over 1,000,000 tons per annum, thereby yielding large revenues to those governments where it has been fostered and brought to a high state of perfection, although in former years it had a feeble beginning. The benefits likely to accrue from the successful introduction of the industry in this country are enlarged upon by the petitioners, and it is asked in conclusion that Mr. Marsilliot be removed from his present official duties and appointed for special work in connection with beet sugar inquiries.—Call.

A FARMER named James Francis, near Victoria, B. C., while felling a tree, was struck by a branch and killed.

etc. If any of our readers have successful experience in introducing the grain, and can give the correct method for securing its growth we shall be pleased to hear from them.

PERSONAL.—Prof. Hilgard has turned the key on his laboratory, hung up his garden tools and taken passage by steam for Portland for a fortnight's recreation. He is too active by nature to take an easy trip, and so he goes out on the ocean. His head will get a rest, doubtless, even at the cost of weariness elsewhere. May the waves be gentle with him and give him back to us refreshed and strengthened.

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Established in the interests of higher education, and in opposition to the cramming system of small colleges and military academies of the State. The next

Term Will Commence July Twenty-Fourth.

EXAMINATION OF CANDIDATES FOR ADMISSION,

July Twenty-Second and Twenty-Third.

By request, instructions have been provided during the summer months for students preparing for the August examinations at the University. For catalogues or particulars, address

JOHN F. BURRIS,
Berkeley, Cal.

NOTE.—We desire to call special attention to the organization of our Grammar Department, separate from the Academical, and solicit the patronage of parents and guardians of small boys.

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Do you want to buy, sell or exchange lands or other property in any part of the U. S. or Canada? Are you a Soldier or Sailor, in want of a Patent? Why not obtain more Bounty or Pension? Do you want to locate Government or State Lands without settlement? Why not? When I have the well-known Approved Soldiers Additional Homesteads, under seal of the General Land Office, and that can be located without settlement, upon any Government \$1.25 or \$2.50 lands, subject to homestead. The Sioux Half-Breed Scrip, for location upon unsurveyed lands.

Land Warrants and Scrip of all Kinds. For cash, or part on time. Good title given or no pay. Have you any lands with an imperfect title to sell, or choice vacant lands you know of which could be located to advantage; or claims not lawfully held, which we could contest. Let me hear from you in full, and I will do my best to inform you what is to your advantage.

I will mail you a circular explaining all, and a copy of the new Pension Law. Address, (plainly)

D. H. TALBOT,

General Land, Scrip and Warrant Broker, Sioux City, Ia.

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Authorized Capital - \$2,500,000,
In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

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ALBERT MONTEPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

THOMAS FLINT, President. J. W. FOARD, Manager.
FERD. K. RULE, Secretary.

OFFICE OF

The California Farmers' Mutual FIRE INSURANCE ASSOCIATION.

209 Sansome Street, San Francisco, Cal.

At a meeting of the Board of Directors of the California Farmers' Mutual Fire Insurance Association, held on the 10th day of April, 1878, a resolution was adopted appointing J. W. Foard, Esq., late Insurance Commissioner of the State, General Manager of the business of the Company.

FERD. K. RULE, Sec'y. THOMAS FLINT, President.

OFFICE OF INSURANCE COMMISSIONER,)
San Francisco, May 24th, 1878. }

I, JOHN C. MAYNARD, hereby certify that I am Insurance Commissioner of the State of California, and have supervision of Insurance business in the State, and as such Commissioner further certify that the California Farmers' Mutual Fire Insurance Association of San Francisco is a corporation properly organized under the laws of this State, and possessed of a paid-up capital of two hundred thousand dollars (\$200,000), equal to gold coin of the United States, is authorized to do business in the State. And I further certify that upon an examination of the books and papers of the said Company, it is shown to be possessed of good, valid assets, amounting to the sum of three hundred and twenty-six thousand six hundred and seventeen dollars and twenty cents (\$326,617.20); and has outstanding liabilities, as defined by the laws of the State, amounting to one hundred and twenty thousand three hundred and two dollars and thirty-seven cents (\$120,302.37), exclusive of capital stock.

As witness my hand and official seal, the day and year first above written.

[Seal.] [Signed.] J. C. MAYNARD,
Insurance Commissioner.

Presenting the above Certificate of the Insurance Commissioner, the Company would call the attention of the public to the fact that in this, the fourth year of its existence, and after prompt payment of all its losses, amounting in the aggregate to \$110,648, it shows a clear surplus for the benefit of policy holders of \$206,314.83 over and above \$115,721.32, set apart as required by the law, as a re-insurance reserve.

Within the past half year radical changes having been made in the management of the Company's affairs, a continuance of the public patronage hitherto accorded it, is solicited at 209 Sansome Street.

THOMAS FLINT, President. J. W. FOARD, Manager.
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DIVIDEND NOTICE.

The German Savings and Loan Society.—For the half year ending June 30, 1878, the Board of Directors of the German Savings and Loan Society has declared a dividend on Term Deposits at the rate of eight (8) per cent per annum, and on ordinary deposits at the rate of six and two-thirds (6 2/3) per cent per annum, free from Federal Taxes, and payable on and after the 15th day of July, 1878. By order.

GEO. LETTE, Secretary.

DIVIDEND NOTICE.

San Francisco Savings Union, 532 California street, corner Webb.—For the half year ending with June 30, 1878, a dividend has been declared at the rate of eight (8) per cent per annum on term deposits and six and two-thirds (6 2/3) per cent per annum on ordinary deposits, free of Federal Tax, payable on and after Tuesday, July 16, 1878.

LOVELL WHITE, Cashier.

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—THE—

Sierra Flume & Lumber Co.

Have over 100,000 Acres of

SUGAR PINE, YELLOW PINE, SPRUCE

Fir and Cedar Lands,

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149 Miles V Flumes,

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Last year thirty millions of feet were cut and the estimate for 1877 is fifty millions; fifteen millions are now on hand, thoroughly seasoned by the hot climate of Red Bluff and Chico.

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Rough or dressed dry, by which elegant and substantial work may be accomplished without delay at the usual cost for green lumber.

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DOORS, SASH and BLINDS always on hand in large quantities. Address

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Land for Sale in Napa County.

I am offering my lands in Foss Valley, ten miles north of Napa City, for sale, as follows—to wit:

One tract of 800 acres, including my homestead, 220 acres of which is choice valley land, the balance good grazing land, is well watered, has a large supply of wood, is well improved, has a comfortable dwelling of nine rooms, barn, granary, sheds, etc. Also, a good orchard and choice vegetable garden. Price, \$15.00 per acre.

Also, one tract of 1,020 acres, about 100 acres of which is valley, the balance good grazing hills, is well watered and has enough wood on it to pay for it. Price, \$5.00 per acre. Also, one tract of 300 acres, 40 acres tillable, a portion can be irrigated from springs, has a large amount of wood on it and 500 rods of stone fence. Is well suited to running a small dairy, and raising pigs and chickens, by which a good living can be made, price \$2,000. The climate is choice, being shut in from the chilly coast winds, but has just breeze enough to make it pleasant, title perfect. The above lands lay contiguous. I will sell the whole or either one of the above tracts on easy terms—a liberal portion can remain at 10 per cent. per annum. If desired, will sell with the land, 1,500 head of Spanish Merino sheep. Come and see me, as I am determined to sell. Address the undersigned at Napa City. WILLIAM CLARKE.

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One thousand six hundred acres of deeded land, in T. P. 19, N. R. 6 W., in Colusa County, situated near Stony Creek, on the county road, from Leesville to Elk Creek, comprising No. 1 farming land, and first-class grazing lands, all enclosed. Good house, seven rooms, well finished and painted. Two large barns, one wagon house, one wool house, large store house, wood house and other small buildings complete. Two good wells of pure cold water and a large spring of never-failing water running about one mile through the ranch. The house is surrounded with shade and ornamental trees. All the farming utensils and about 50 tons of hay will be thrown in if purchased soon. Any one wishing to engage in the dairy, or stock business of any kind, cannot find a better location in the State. Price, \$7.50 per acre, one half down and the balance to suit purchaser. For further particulars, apply to James W. Good, Colusa, or the undersigned.

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\$4,000.—Two Hundred Acres of
Land in Mendocino County.

Thirty miles from the county seat, and 20 miles from the Coast, one of the healthiest localities in the State, especially for consumptives. The place is fenced off in six different fields. Plenty of water and timber for all purposes. A good orchard. Vegetables of all kinds grow well. A good dwelling with six rooms, ceiled and painted inside, good frame barn, granary, storehouse, smokehouse, etc.

Also, Six Hundred acres of grazing land, well fenced, three miles from the above farm, plenty of water and timber for all purposes. Price, \$2,250.

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that Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

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There has been steady and tolerably rapid advancement made in the growth of a majority of the towns in Colusa, Butte, Tehama and Shasta counties. Especially is this so in the agricultural districts where the land produces at least fair crops in all seasons—wet or dry—as does the land on the Reading Ranch. Those looking for homes in California where diversified farming will pay every year; where wood and water are plenty and easy to be obtained, and other desirable advantages are to be had, should address the proprietor of the Reading Ranch.

Some 14,000 out of 26,000 acres of the grant remain for sale at comparatively low rates, in quantities to suit purchasers, on easy terms. Prices range from \$5 to \$30 per acre. The tract is between two and three miles wide, with the Northern Division of the C. P. R. R. passing centrally through its entire length. Send postage stamp for an illustrated paper containing information about Shasta County and these lands, to the proprietor of Reading Ranch.

Anderson, Shasta County, Cal.

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We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis the while enable the country at large to transact business through us to their entire satisfaction.

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DANIEL INMAN, Manager.

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Have located in Grass Valley, Wasco County, on the line of the Dalles Military Road, 20 miles from the Columbia River, between the Deschutes and John Day Rivers; 31 miles from the Dalles.

THE TOWN SITE

Is located on a small stream, fed by numerous springs, in the center of a beautiful rolling prairie, 50 miles long by 30 miles wide, of the very richest soil, heavily covered with fine bunch grass.

A Plenty of Government Land for All.

The climate is (unlike Western Oregon) dry and delightful, all kinds of Grain, Fruit and Vegetables, etc., grow perfection. Average wheat crop—46 bushels per acre.

640 Acres Secured for a Town-site and Called Lockville.

NO LIQUOR SALOONS OR CHINESE ALLOWED.

Hotels, Stores and a large number of Houses already in course of construction. Immigrants will do well to look at this location before going further north.

A Stage will soon leave the Dalles, (from the Pioneer Hotel,) daily for Lockville.

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BRANDS OF

Coffee and Spices Have no Superior.

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IN THE BUSINESS ON THIS COAST ENABLES THEM TO PLACE ON THE MARKET THE VERY BEST GOODS AT THE LOWEST POSSIBLE PRICES.

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Breeder and Importer of the "Crown Prince," "Sambo," and "Bob Lee" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.

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\$25 EVERY DAY Is warranted using JILZ WELLS AUGERS and DRILLS. Took the first premium at the Great Exposition. They bore any diameter and depth; 100 feet a day, through earth, sand or rock. Pictorial auger book free. Address Col. PETER SAXE, Los Angeles, Cal., Agent for Pacific States.

"Latimer Farm" Berkshires.

ALFRED, PARKER, Bellota, Cal.

PROPRIETOR.

—1—

Choice pigs of all ages and of the best quality and breeding constantly on hand. Have sold a great many pigs, (10 within a few days, including a trio to the State Insane Asylum at Stockton), and have yet to receive one word of dissatisfaction. Correspondence solicited and cheerfully answered. Address

ALFRED PARKER, Bellota,
San Joaquin County, Cal.

THOROUGHbred SPANISH MERINO SHEEP!

200 Extra Rams



For sale. Yearlings and two-year-olds. In size, quality and condition unsurpassed. Also, 100 ewes at prices to suit the times. The nucleus of this flock was from a purchase made from Severance & Peet in 1873. My ranch is at Haywards, Alameda county, and may be reached by rail from San Francisco, seven times daily. Parties desiring choice sheep should see this flock before purchasing elsewhere.

J. H. STROBRIDGE.

CHOICE PIGS FOR SALE.

I have a few fine Lancastershire pigs for sale, now about four weeks' old. Bred from choice imported stock. Address

GRANT I. TAGGART,
Eighth Street, near Broadway, Oakland

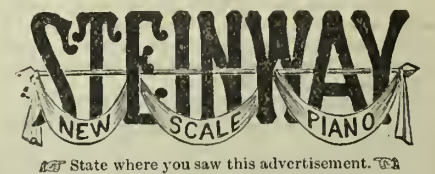
NEW MUSIC! NEW MUSIC!

At Gray's No. 105 Kearny Street,

On receipt of the amount in postage stamps, any of the following pieces will be mailed, post-paid:

BABY MINE, (Song).....Smith, 35 cts.
BABY MINE, (Schottische).....Stuckenholz, 35 cts.
EMMETT'S LULLABY, (Piano Solo)....Far West, 35 cts.
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Send for complete Catalogue of Music and Descriptive list of the



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M. COOKE.

R. J. COOKE.

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit & Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY.



Calvert's Carbolic SHEEP WASH, \$2 Per Gallon

After dipping the sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

The Resources and History of Shasta County.—No. 4.

The Farming Lands

Are mainly in the central third of the county, sloping south, sheltered by the great mountain ranges, and possessing a climate where the fig, vine and olive will succeed perfectly, and where oranges, almonds and walnuts may be grown with ease.

The largest body of fine farming land is along the river from near Cottonwood to a point near Reading, embracing originally 26,000 acres, and known as the Reading grant. The different kinds of soil found in the county are well shown here. A portion of the grant is moist enough for summer vegetables or winter potatoes, the greater portion is the finest of wheat land, producing a crop every season; some of it is a red upland similar to the fruit lands of Placer county, and unsurpassed for orchards and vineyards. The entire bottom land of the grant is dotted over with white oaks of the largest size; there is little undergrowth, and the surface is gently undulating. This ranch was a Spanish grant confirmed to Major Penyon B. Reading in 1854. The Major was one of the pioneers of northern California and lived an eventful life. Coming to California in debt, he made his pile, went East and paid off everything with interest. He then returned to the grant, laid out a town near the mouth of Clear creek, built a steamer and navigated it to that point, began to invite settlers and develop the country. But he went to heavy expenses, and dying suddenly, the property was involved, and passed into the hands of J. B. Haggin, known by his large estates in Kern, Sacramento and elsewhere. Whilst under his control the grant was mainly pastured and rented, and, having interests elsewhere, little if any effort was made by Mr. Haggin to settle up the country. In the summer of 1877, a successful farmer in Solano county,

Mr. Edward Frisbie,

Brother of General Frisbie, of Vallejo, gave the grant a careful examination and seeing that the crops were first-rate, notwithstanding the great drouth, observing too, the central location, the fine local market to the mines, and, in short, the great agricultural value of these lands, concluded to purchase and divide them up

For Actual Settlers.

Several have already purchased, and so far, all who have seen the lands are well pleased. The crops this year, as observed during a trip made early in June, are fully equal to the best in Alameda county or near Salinas. When we remember that there is always rain enough to insure a crop in Shasta county, we cannot wonder that so many are looking northward. Being away from any broad belt of settled lands, this fine tract, which possesses less drawbacks than nine-tenths of the farming lands of California, has seemingly had its merits overlooked. The purchases made upon the tract have hitherto been mainly by persons living in the mountains above.

Several large stock ranches may be bought, and a number of small places on the various creeks in the eastern part of the county.

The government lands, now open for settlement, are worthy the attention of all men of small means. East of the Sacramento river there is an almost level region some 30 miles long and 15 miles wide, lying along the Stillwater and Cow creek. The general character of the country here is that of a rolling, well-timbered plain. The soil is the same red wheat land formerly called worthless in Butte and Placer, but now, by the use of summer fallow, found very valuable. In this large area mentioned only a few settlers have as yet located, but others are coming in every day and with a determination to remain. It is only a question of time with regard to the occupancy of these lands. The first comers will pick the best, of course. This section of country, lying within the railroad belt, is half of it railroad land. On the Stillwater plains several men put in hay last year and felt justified in proceeding. This year there is about 1,000 acres of wheat and barley on this land. The wheat will average 10 cents and the barley about 15 cents. This is mainly on government land which was cleared and broken up last fall.

East of Millville, after ascending the Sierras some 500 feet, we enter upon the fruit belt and pass on for miles over a timbered and rich country, well adapted to the growth of grain, fruits and vegetables. In many places water for irrigation can be had at a slight cost, but the finest fruit can be raised without it. At Ogburn's ranch our correspondent was shown last year's Tulpehocken apples perfectly sound on the 3d of June. This variety in Alameda county will decay in January. Just at this season (early June) the cherries are beginning, and the large English gooseberries which do not mildew here. In fact, all the small fruits flourish remarkably and have a richer flavor than in the valley.

NURSERYMEN'S ASSOCIATION.—The American Association of Nurserymen, Florists and Seedsmen convened in its third annual session on Wednesday, June 19th, in Rochester, N. Y. The delegations were quite full for the first day's meeting, 40 members reporting from various parts of the United States and Canada. The meetings were interesting and valuable to those present. Mr. W. H. Heaver of Los Angeles was chosen Vice-President for California.

Our "Governors" Heard From.

EDITORS PRESS:—A week ago to-day we had the pleasure of a visit from the proprietors of the *RURAL*, Alfred T. Dewey and W. B. Ewer. It was truly a surprise to meet and greet those whose names we have been familiar with for years through the *RURAL PRESS*, but never had the pleasure of a personal acquaintance. It was hard to believe at first introduction that the city-refined could appear in camping costume, as if they were returning harvesters. But, although the outward manifestations might deceive the superficial observer, the mind is the true index of the soul. Grandly enthroned within, it stands poised far above outward conditions, whether surrounded by diamond gems, or plain attire. We hope that when the publishers return, the editor will find leisure for relaxation, and we shall try and extend our warmest greeting and hospitality. Campers confine themselves to their gypsy mode of life, and it is hard to make them inmates of your domicile. We hope your "governors" enjoyed their recreative trip. It is no easy task to travel and keep house out of doors, but the ordeal becomes almost necessary through the harassing cares of a business life in a large city. It was very gratifying to us to welcome the enterprising proprietors of the *RURAL* and *SCIENTIFIC PRESS*, and I hope that the round trip will fully meet their anticipations.

JOHN TAYLOR.

Mt. Pleasant, Tuolumne Co., Cal.

We are glad our "governors" are finding friends along their route, and that their camping costume does not obscure their proper personality. We have never seen them "surrounded by diamond gems" to any extent, but they are perhaps more worthy than those who are. The editor returns thanks for the invitation to the foothills. When the *RURAL* gets old enough to run alone, without holding on to the editorial chair, we promise ourselves a holiday.

WASHINGTON COLLEGE.—In our advertising columns, Rev. S. S. Harmon announces the opening of the new academic year at Washington College in Alameda county. This institution is held in high esteem by our agricultural population, as is shown by the large numbers of farmers' sons and daughters among its students. Students come from all parts of this State and from Nevada. Classes are arranged in all grades of study from the elementary to the highest academic branches. Buildings are provided for youth of both sexes, and the opportunity to place brothers and sisters in the same institution is acceptable to parents. Rev. and Mrs. Harmon have been known for years as among our leading educators, and the fruit of their ripened experience is an institution in every way praiseworthy. The home life of the college is very pleasing to the students, and very wholesome in its effect, as the discipline of the school room is supplemented by careful culture in the arts and truths of individual and social behavior. The location of the college on a slight rise of ground overlooking the Alameda valley, the bay and the Coast range beyond, is beautiful and is remarkable for its healthfulness. Washington is accessible from all points, being a station on the San Jose branch of the C. P. R. R., next to the junction with the main line at Niles.

THE "RURAL PRESS."—The best agricultural journal of the Pacific coast, closed its fifteenth volume on Saturday. Of all our weekly exchanges none are more welcome than is the *PACIFIC RURAL PRESS*. It is devoted to the advancement of the leading interest of the State, and throws a steady flood of scientific light upon agriculture, as the fruit of ripe experience, long study and zealous enthusiasm. It has won the favor of scientific men throughout the coast, as its numerous contributions from these sources amply show, and it has come to be acknowledged as the standard medium of the coast for diffusion of information on the science of husbandry. It is an invaluable journal to the farmer, and we wish it the amplest success in every way.—*Stockton Independent*, July 1st.

SACK-HOLDER.—A typographical error in the advertisement of H. M. Covert's "California Sack-Holder," located it at 806 Davis street, when it should have been 306 Davis street. The location is close to Clay street, and all interested can find the apparatus and some one to explain its working at 306 Davis street.

NEW WHEEL TIRE.—A new wheel tire has recently been invented. It consists in passing around the usual tire a rubber tire, and around this again an iron tire made in sections, so that each section may yield inward as the weight comes upon it. It is said to lessen noise, jarring and wear.

INSURANCE.—An advertisement in our columns calls attention to the new location of the Farmers' Mutual Insurance Company, and gives the statement of the State Insurance Commissioner as to its capital, etc. Those interested should read the announcement.

Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s *SCIENTIFIC PRESS* American and Foreign Patent Agency, the following are worthy of mention:

ROPE TRAMWAY.—Thos. H. Day, S. F. Mr. Day's invention relates to certain improvements in the construction of wire-rope tramways and apparatus. It consists in a novel construction of the tube within which the rope runs beneath the permanent way, so that it may be laid without cutting the cross-ties or sleepers, made much smaller than heretofore and very much more cheaply. It also consists in a means of detaching the grip from the rope and throwing it entirely out of the tube, so that the car may be made to cross another wire ropeway at any angle, or may be switched off upon a siding or transferred to another line of track at any point without the necessity of going to the full length of the line or to any special point on the line, where there is a turn-table or other apparatus for transferring the car or dummy. The peculiar apparatus employed for the purpose of making the connection between the car and rope and throwing the grip entirely out of the tube makes it possible for the inventor to run a line of cars in both directions with but a single line of track, and neither car, grip or any portion of the apparatus need be reversed in any manner.

FOLDING CARRIAGE DOOR.—Anthony Bink, S. F. The improvements relate to that class of carriages in which the top or hood is made to be thrown back or forward, so as to leave an open carriage. The invention consists more particularly in a novel construction of the door with its pillar, top bar and rear standing pillar, so that, while they may be folded down out of the way in the open carriage, it will be possible to form a complete door-frame when the hood is up.

SPINNING TOP.—Christoph Raetz, S. F. This spinning top has a handle with a torsional actuating or propelling spring and an actuating shaft, constructed with a notched end, so that it may be temporarily connected with the corresponding end or stem of the top. There is also a trigger, which holds the spring or releases it when desired. The spring is wound up, and, by pulling the trigger, the top will be disengaged from the clutch by the momentum of the spring and is thus caused to spin.

COUNTING AND FORMING COIN PACKAGES.—Jas. Ostergard, Cherry Creek, Nev. The device is intended for counting a number of coins and forming them into a roll, so that they can be conveniently covered or inclosed either by paper or other form of coin holder. It consists of a metallic base, having vertical standards, between which a certain number of coins are placed to form a package.

CARRIAGE.—Joseph J. Gallagher, Davisville, Yolo county. This invention relates to certain improvements in the construction of carriages, and consists in a novel construction and combination of springs for supporting the buggy and also in the gearing.

NAPKIN HOLDER.—Lucius Thompson, S. F. This improved device is intended for clasp ing or holding the corner or edge of a table napkin, in combination with a hook for suspending it from the neck-band of a person, for protecting his or her clothing while eating.

Woodward's Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a boa-constrictor have just been added. New stars are constantly engaged for the Pavilion exercises. Rates of admission as usual.

Farmers! Farmers!!

Throughout California are requested to send their orders for any kind of labor to the "Free Labor Exchange," 33 and 35 O'Farrell Street, San Francisco. All hands carefully selected free of charges to employers and employees.

POPULAR MUSIC.—Make your homes merry and popular with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. The *RURAL PRESS* can offer to introduce you there.

SETTLERS and others wishing good farming lands for sure crops, are referred to Mr. Edward Frisbie, of Anderson, Shasta County, Cal., who has some 15,000 acres for sale in the Upper Sacramento Valley. His advertisement appears from time to time in this paper.

A GREAT COMPLIMENT.—A Grand Piano from Steinway & Sons, New York, which we saw and heard in Dr. Franz Liszt's Music Room, we must acknowledge as the grandest creation that modern science, in Piano building, has produced.—*From the New Leipzig Musik Zeitung*.

MR. W. J. WOOLLEY, who took out a Canadian Patent some four years ago, is requested to call at the *MIXING AND SCIENTIFIC PRESS PATENT AGENCY OFFICE*. Business of importance.

Hearing Restored. Great invention by one who was deaf for 20 years. Send stamp for particulars. *VERY & HARPER*, Lock Box 80, Madison, Ind.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 10th, 1878.

The receipts of Wheat are considerably larger this week and the time of considerable dealings must be at hand. Grain values have not varied materially from last week. Reports of rust continue to arrive from many different quarters, but it is impossible to estimate the general effect upon the yield of grain.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.	CLUB.
Thursday.....	Fourth of	July, Holiday.
Friday.....	9s 11d@10s 2d	10s 3d@10s 9d
Saturday.....	9s 11d@10s 2d	10s 3d@10s 9d
Monday.....	9s 11d@10s 2d	10s 3d@10s 9d
Tuesday.....	9s 11d@10s 2d	10s 3d@10s 9d
Wednesday.....	9s 11d@10s 2d	10s 3d@10s 8d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.	Club.
1876.....	9s 9d@10s 1d	10s —@10s 5d
1877.....	12s 2d@12s 5d	12s 5d@13s —
1878.....	9s 11d@10s 2d	10s 3d@10s 8d

The Foreign Review.

LONDON, July 9th.—The *Mark Lane Express* says: Agricultural reports, although somewhat variable, are, generally speaking, favorable as to the appearance of wheat fields. The growth of straw is everywhere abundant. The plant is now strong, and the season is so far advanced that the chances of damage from any future untoward weather are greatly diminished. Unless the summer proves exceptionally disastrous, a yield of rather over 11,000,000 quarters may be looked for as the product of the home crop. Barley has improved slightly in some districts, but the crop is too much injured to yield anything but badly. Beans and peas are still fairly promising. In other respects the agricultural situation remains unchanged. Small supplies and a less demand have been the characteristic features of the trade for English Wheat at Mark Lane and the country, but no further decline has taken place. With moderate arrivals at ports of call, the floating cargo trade for Wheat has been fairly steady, with some inquiry for the United Kingdom and the Continent, but prices closed 6% per quarter lower. Maize is unchanged. Barley has slightly declined.

Freights and Charters.

The *Commercial News* says: "The prospect of satisfactory freights being paid before fall is poor. There is no present disposition to force ships on the market, they being apparently firmly held until such time as Wheat comes in freely and dispatch can be given. For immediate loading, moderate sized wooden ships could be obtained at £2 10s for Liverpool direct, and large wood possibly at £2 7s 6d. Iron ships are quotable at 2s 6d advance on these rates, but it is difficult to say whether they would be accepted, as of late English owners appear strongly inclined to purchase on their own account. We have now 46,243 tons in port engaged for Wheat, 53,799 tons disengaged, 4,873 tons miscellaneous, and 226,226 tons on the way."

Eastern Grain Markets.

NEW YORK, July 6th.—The Grain market has been extremely dull this week, but with a material decrease in the receipts of Wheat, prices have advanced 5@6c, bringing No. two Spring up to \$1.02@1.05, and the range for all kinds to 95c@1.18—the latter price for handsome White Winter. The harvest is making good progress, and has extended to the lakes. The yield of the Winter Wheat is unprecedentedly large, and of excellent quality. The spring crop is variable, but there is no doubt that it will be equal to the average of that of the best years in the past. The hot weather of the past two weeks has forced the growth of Corn wonderfully, and the prospects of a full crop are not flattering; and yet, with a heavy surplus of old crop on hand, the price has advanced about 2c, and the article is still considered very cheap. Flour is a trifle firmer, but not quotably higher, the hot weather creating a pressure to sell.

CHICAGO, July 6th.—The week's business has been small, although before the vacation, which began Wednesday noon and will last until Monday, there was an active unsettled feeling in Grain and higher prices. The street sales the last three days of the week, although not considered in this summary, betoken lower prices in sympathy with neighboring markets. Sales of August Wheat, 82@83½c; Corn, 36½@37½c; Oats, 22½@23½c; Pork, \$9.07½@9.50; Lard, \$6.75@6.87½. Prices for cash closed on Wednesday as follows: Wheat, 92½c; Corn, 37½@37¾c; Oats, 22½c; Rye, 48½c; Barley, 48½c; Pork, \$9.15; Lard, \$6.72½. It is probable that Monday's opening will find these figures materially shaded. Receipts for the week of Grain were: 1,867,000 bushels; shipments, 2,183,000 bushels.

The Oregon Wheat Crop.

The Portland Commercial Reporter of last

Thursday says: Immediately following our last week's issue, the hot, scorching weather gave place to cool cloudy weather, followed by gentle showers. This change for the better has not come any too soon to help fill out the most advanced grain, but it is most too late to greatly benefit, except in sections, late sown, many fields of which will be summer fallowed. From all advices to hand, we think that under any circumstances the crop in this valley and Umpqua will be about seven-eighths of last year and may be fully up, unless we have hot, scorching weather, with absence of dews at night. This we base on the increased acreage reported from all points. The number of Chinamen, independent of whitemen, that have been engaged in clearing land in this valley, has averaged from 1,050 to 1,150 men for the past six months. These are divided principally in four counties. The construction of the Dayton and Sheridan railroad has caused an increased acreage in that section of from one-quarter to one-half. From east of the Cascades advices are more encouraging, and give promise of a full yield, which, with an acreage of about double, will send to us an immense surplus from that section.

Eastern Wool Markets.

NEW YORK, July 6th.—The excitement in the country has in a measure subsided, though buyers are still paying much higher prices than Eastern markets warrant. In Ohio sales are being made at 32¢@34¢, and in Michigan and Wisconsin at 30¢@31¢. Sales, though, were made at higher rates than those above quoted during the excitement that at one time prevailed. California Spring is in better supply, but during the week has found but limited inquiry. Dealers generally hold all descriptions with much greater confidence than they have shown in the immediate past, the opinion having gained ground that prices are now resting on hard bottom. The sales for the week include 5,000 lbs fine Spring California, 23¢@25¢; 2,500 lbs fine Spring Texas, 25¢; 5,000 lbs medium do, 22¢; 5,000 lbs old XX Ohio, 36¢; 15,000 lbs new Michigan, 32¢, and 50,000 lbs Spring California.

BOSTON, July 6th.—Wool transactions the past week have been the most active since the 1st of January, and the market appears to have recovered from the depression of such long continuance. It is evident that the lowest point has been touched for the present, but the improvement is not on so firm a basis as could be desired. The manufacturing business is far from satisfactory, and it remains to be seen whether the fall demand for goods will sustain the present improvement in Wool. Transactions in fleeces have been the largest for a long time, and, including unwashed Western and Texas, have amounted to about 1,000,000 lbs. The demand for combing and delaine fleeces still continues, and manufacturers have been free purchasers. Sales of the week, 578,000 lbs. Pulled Wools are steady, with a fair demand. Sales for the week comprise Ohio, Pennsylvania and Western Virginia No. 1, X and XX, at 35¢@39¢; Michigan X and above, at 35¢; washed delaines and combing, at 38¢@42¢; unwashed combing and delaine, at 29¢@30¢; Texas, at 15¢@29¢; unwashed fleeces, at 22¢@29¢; scoured, at 40¢@80¢; super and X pulled, at 27¢@40¢; tub-washed, at 39¢. Sales of California have been 349,000 lbs, at full previous prices, including choice northern Spring, at 28¢@30¢, one lot bringing as high as 31¢; Fall, 15¢@18¢. Total sales of domestic Wool for the week have been 2,233,600 lbs.

Flour and Grain in California July 1st.

W. H. Walker, Secretary of the Produce Exchange, issues his semi-annual statement showing the amounts of Flour and Grain remaining in the State of California, on July 1st, 1878, as taken by the San Francisco Produce Exchange.

	Flour, Bbls.	Wheat, Ckls.	Barley, Ckls.	Oats, Ckls.	Corn, Sks.
S. F. Oak'd wharf & admt	13,671	98,570	65,411	24,269	10,336
North Coast, Russian River and Petaluma	300	11,100	8,230	805	230
Napa, Valjo & Cal. Pac. R.R.	2,000	20,200	8,250	.....	.....
Sac. Valley and River.....	3,000	99,000	22,000	.....	.....
Lower Sac., Lower Joaquin and Suisun Bay.....	500	12,844	5,785	.....	.....
S. F. Bay Landings, east side	.....	.....	15,350	350	.....
San Leandro to Livermore	.....	.....	9,600	.....	.....
Stockton & San Joa. Val.	1,000	40,000	.....	.....	.....
S. P. R. R. to Hollister and Alviso.....	360	1,520	720	2,140	.....
Salinas and Pajaro Valleys	.....	740	740	2,000	.....
Southern Coast.....	400	450	4,812	1,100	.....
Totals.....	20,231	234,424	147,598	29,564	11,666

Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. June 10.	WEEK. June 20.	WEEK. July 2.	WEEK. July 10.
Flour, quarter sacks..	40,593	31,701	13,503	29,645
Wheat, centals.....	27,317	37,945	53,676	101,305
Barley, centals.....	13,479	22,600	13,157	14,523
Beans, sacks.....	163	365	139	459
Corn, centals.....	5,785	2,003	9,790	10,876
Oats, centals.....	3,523	6,107	6,154	1,530
Potatoes, sacks.....	8,004	9,388	6,747	8,387
Onions, sacks.....	1,350	864	673	530
Wool, bales.....	1,343	5,856	2,249	3,824
Hops, bales.....	150	22	.....	42
Hay, bales.....	1,267	1,742	1,780	1,234

BAGS—The movement to concentrate Bags is reported to have succeeded. The ring was forced to buy out the stock of the Pacific Jute Company at a fraction under 10c. They also had secured 2 large cargoes which arrived during

the week from Calcutta and Dundee. They have advanced the rate to 11½¢ for wholesale lots. The agreement is reported to expire October 1st. Some lots of Bags are held by outside dealers, which are now put up to the ring price. This is the reported condition of affairs.

BARLEY—Barley receipts are moderate and prices are maintained. We note sales of 100 sks new Feed at 90c; 750 cts Coast Feed at 87½¢; and 400 choice at 92½¢ cts. There are some scattering lots of old held for brewing purposes, for which the demand is irregular. A lot of 2,000 cts sold at \$1.07½.

BEANS—Beans are still in small supply and sales are made at old prices.

CORN—Yellow Corn is a shade easier. The California grown is nearly used up, and the Mexican demand is being supplied from Omaha. There may be a maintenance of the Mexican demand long enough to take some of our new crop which will be ready next month.

DAIRY PRODUCE—Some diminution is perceptible in the Butter receipts, and an improvement in prices is anxiously looked for. To-day the old rates prevail.

EGGS—Receipts of Eggs are falling off and the price is firm, with perhaps a slight improvement during the week.

FEED—The Hay market is depressed. The supplies arriving are generally of a poor quality and sell slowly. Prices are about the same as last week.

FRESH MEAT—An improvement is apparent in all grades of fresh Beef and in Mutton and Lamb. The market is, however, quiet and sales regular.

FRUIT—The first Yellow Peaches have come and they will soon be abundant. Grapes are also in for the first time this week. Berries are abundant and very low. Prices of all Fruits may be found in our table below.

HOPS—There is nothing new. Lots are offered to clean out stock but without takers. Emmet Wells reports the N. Y. market for the week ending June 28th as follows: "Last week's advance in the price has been well maintained, though at this writing there is less disposition shown to speculate, and fewer Hops are changing hands. The export movement has also been checked by the advance, shippers contending that there is now no money in the business for them, the rise of two cents per lb, swallowing up their profits; and until they hear of a corresponding improvement in the price in London, nothing will warrant further purchases for export account. Crop reports, as will be seen by the extracts taken from our exchanges, are somewhat of a mixed character, though we think them, as a rule, more favorable than last week, and with a continuance of the present hot weather the vine is likely to show a marked improvement within the next week or ten days."

LIVE STOCK—We hear of sales of 500 Lambs at \$2 per head; 275 bullocks, \$27.50 per head; 600 sheep, \$2.10 per head; 75 calves, \$11 per head; all gold.

OATS—Oats are scarce and the price has been elevated to \$1.50 for the choicest Feed; 200 sks choice Feed sold yesterday at \$1.47½ per cts.

ONIONS—Onions have declined; \$1.05 per cts is the extreme price for San Leandro, 75c for River Onions and 50c for San Pedro.

POTATOES—There is no change since last week. The market is quiet.

PROVISIONS—California Smoked Beef is ½¢ higher. Eastern Hams are selling at last week's advance, with the exception of Whit-takers, which are reported to be in bad condition.

VEGETABLES—Asparagus and Marrowfat Squash and Tomatoes have gone up. String Beans are reduced to the lowest notch. The advance in Tomatoes is partly owing to great improvement in quality of those now arriving.

WHEAT—The top price for Shipping is \$1.62½ to-day. The market is held firm by the small consignments hitherto made. We note sales: 325 and 1,200 cts new at \$1.62½; 2,000 do at \$1.60; 1,000 old fair Milling at \$1.63½; 2,000 good old Milling, at Vallejo, at \$1.62½; 6,000 good new Shipping, at Vallejo, at \$1.60; 4,000 cts old Milling at \$1.65; 1,000 and 200 new at \$1.60 per cts.

WOOL—Receipts are now chiefly Northern and of good quality. Such lots sell readily and stocks are low. We note sales: 175,000 lbs various grades, 15¢@23½¢; 17,200 lbs Sacramento, with some cockle burs, 22¢ per lb; 160,000 lbs Eastern Oregon, selected, at 18½¢ per lb.

RETAIL GROCERIES, ETC.

WEDNESDAY, M., July 10, 1878.	
Butter, California	25 @ 35
Choice, lb.....	18 @ 25
Cheese.....	25 @ 30
Eastern.....	18 @ 25
Lard, Cal.....	20 @ 25
Eastern.....	20 @ 25
Flour, ex. fam. bbls	10 @ 90
Corn Meal, lb.....	21 @ 3
Light Brown.....	12 @ 9
Sugar, wb. crsbd	12 @ 13
Light Brown.....	8 @ 9
Coffee, Green.....	23 @ 35
Tea, Fine Black.....	50 @ 60
Finest Japan.....	55 @ 60
Candles, Admt'g.....	15 @ 25
Soap, Cal.....	7 @ 10

Gold, Legal Tenders, Exchange, Etc.

SAN FRANCISCO, July 10, 3 P. M.
GOLD IN NEW YORK, 100.
GOLD BARS, 89¢@90¢. SILVER BARS, 21¢@22¢.
EXCHANGE ON NEW YORK, 1½¢, on London bankers, 49¢@49½¢. Commercial, 50¢; Paris, 5¢ francs 3¢ dollar; Mexican dollars, 94¢@95¢.
LONDON Consols 95½; Bonds, 108½.
QUICKSILVER IN S. F., by the dask, 42¢.

DOMESTIC PRODUCE.

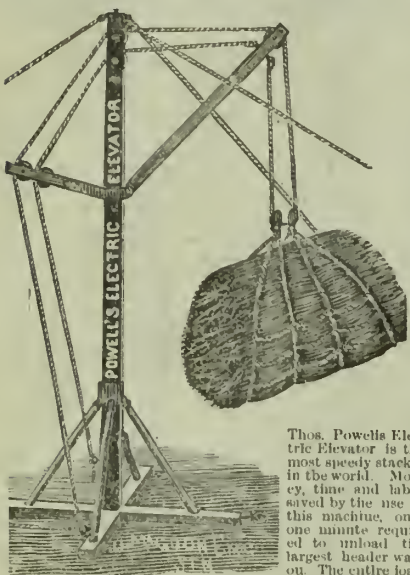
[WHOLESALE.]

WEDNESDAY M., July 10, 1878.

BEANS & PEAS.	Bayo, cts.....	5 75 @ 60	Filberts.....	15 @ 16
Butter.....	4 25 @ 45	Alviso.....	— @ —	
Red.....	— @ —	Union City, cts.....	— @ —	
Pink.....	6 25 @ 60	San Leandro.....	00 @ 01 05	
Sm'l White.....	— @ 75	Stockton.....	75 @ —	
Lima.....	4 25 @ 45	Sacramento River.....	— @ —	
Field Peas.....	1 10 @ —	San Pedro.....	50 @ —	
		Oregon.....	— @ —	
BROOM CORN.	Old.....	3 1/2 @ 7	Petaluma, cts.....	— @ —
New.....	4 1/2 @ 8	Humboldt.....	— @ —	
CHEESE.	California.....	4 @ 43	Curry Rose.....	2 00 @ 2 50
German.....	6 1/2 @ 7	Half Moon Bay.....	1 50 @ 2 00	
DAIRY PRODUCE, ETC.	Cal. Fresh Roll, lb	19 @ 22	Salt Lake.....	— @ —
Fancy Brands.....	24 @ 25			
Pickle Roll, new.....	22 @ 24			
Firm, old.....	12 @ 16			
Western Reserve.....	12 1/2 @ 14			
New York.....	— @ —			
BUTTER.	Cal. Fresh Roll, lb	19 @ 22		
Fancy Brands.....	24 @ 25			
Pickle Roll, new.....	22 @ 24			
Firm, old.....	12 @ 16			
Western Reserve.....	12 1/2 @ 14			
New York.....	— @ —			
CHEESE.	Cheese, Cal., lb.....	8 @ 11		
Eastern.....	10 @ 12			
N. Y. State.....	— @ —			
Gilroy Factory.....	12 1/2 @ 13			
Cal. Fresh, doz.....	26 @ 28			
Ducks.....	23 @ 24			
Oregon.....	22 @ 23			
Eastern.....	16 @ 19			
do Pickled.....	— @ —			
FEED.	Brant, ton.....	— @ 15 00		
Corn Meal.....	41 @ 00			
Hay.....	7 00 @ 13 00			
Middlings.....	21 @ 22 50			
Oil Cake Meal.....	34 @ —			
Straw, bale.....	25 @ 60			
FLOUR.	Extra, bbl.....	5 00 @ 5 50		
Superfine.....	4 25 @ 4 37 1/2			
Graham, lb.....	3 1/2 @ 3 1/2			
FRESH MEAT.	Beef, 1st quality, lb	5 1/2 @ 6		
Second.....	4 1/2 @ 5			
Third.....	3 1/2 @ 4 1/2			
Mutton.....	4 @ 4 1/2			
Spring Lamb.....	6 @ 6 1/2			
Pork, dressed.....	5 1/2 @ 6 1/2			
Dressed.....	5 1/2 @ 6 1/2			
Veal.....	6 @ 6 1/2			
Milk Calves.....	6 @ 7 1/2			
GRAIN, ETC.	Barley, feed, cts.....	10 @ 95		
Brewing.....	10 @ 115			
Chevalier.....	1 50 @ —			
Buckwheat.....	1 30 @ —			
Corn, White.....	2 10 @ 25			
Yellow.....	95 @ 200			
Small Round.....	2 00 @ 10			
Oats.....	25 @ 10			
Milling.....	1 55 @ 65			
Rye.....	1 12 1/2 @ 15			
Wheat, Shipping.....	1 60 @ 62 1/2			
Milling.....	70 @ 82 1/2			
HIDES.	Hides, dry.....	14 @ 15		
Wet salted.....	8 @ 91			
HONEY, ETC.	Beeswax, lb.....	30 @ 31		
Honey in comb.....	14 @ 15			
do, No 2.....	12 1/2 @ 14			
Dark.....	10 @ —			
Strained.....	6 1/2 @ 8			
HOPS.	Oregon.....	4 @ 5		
California.....	4 @ 7			
Wash. Ter.....	4 @ 6			
NUTS—Jobbing.	Walnuts, Cal.....	8 @ 9		
do Chile.....	7 @ 8			
Almonds, hd shi lb	7 @ 8			
Soft shi.....	14 @ 16			
Brazil.....	14 @ 16			
Pecans.....	13 @ 14			
Peanuts.....	5 @ 6			
ONIONS.	Alviso.....	— @ —		
Union City, cts.....	— @ —			
San Leandro.....	00 @ 01 05			
Stockton.....	75 @ —			
Sacramento River.....	— @ —			
San Pedro.....	50 @ —			
Oregon.....	— @ —			
POTATOES.	Petaluma, cts.....	— @ —		
Humboldt.....	— @ —			
Curry Rose.....	2 00 @ 2 50			
Half Moon Bay.....	1 50 @ 2 00			
Salt Lake.....	— @ —			
POULTRY & GAME.	Hens, doz.....	9 00 @ 10 50		
Roosters.....	8 00 @ 9 00			
Broilers.....	3 00 @ 6 00			
Ducks, tame.....	4 00 @ 8 00			
do, Mallard.....	— @ —			
Geese, pair.....	1 25 @ 1 75			
Wild Gray, doz.....	— @ —			
White do.....	— @ —			
Turkeys.....	18 @ 23			
do, Dressed.....	— @ —			
Suise, Eng.....	— @ —			
do, Common.....	— @ —			
Rabbits.....	1 50 @ —			
Hare.....	3 00 @ 4 00			
PROVISIONS.	Cal. Bacon, Hvy, lb	11 @ 11 1/2		
Medium.....	11 @ 12 1/2			
Light.....	12 @ 13			
Lard.....	11 @ 13			
Cal. Smoked Beef	10 @ 11			
Eastern.....	— @ —			
Shoulders, Cover'd	7 1/2 @ 8 1/2			
Hams, Cal.....	11 1/2 @ 12 1/2			
Dupee's.....	15 @ 16			
Boys's.....	14 @ 15			
David Bros.....	15 @ 16			
None Such.....	15 @ 15 1/2			
Ames.....	15 1/2 @ 16			
Whittaker.....	7 1/2 @ 10			
SEEDS.	Alfalfa.....	5 @ 12		
Canary.....	6 @ 8			
Clover, Red.....	16 @ 18			
White.....	50 @ 55			
Cotton.....	6 @ 10			
Flaxseed.....	3 1/2 @ —			
Hemp.....	5 @ —			
Italian Rye Grass	35 @ —			
Perennial.....	35 @ —			
Millet.....	10 @ 12			
Mustard, White.....	4 @ —			
Brown.....	2 1/2 @ 3			
Rape.....	3 @ 4			
K. B. Grass.....	20 @ —			
2d quality.....	18 @ —			
Sweet V Grass.....	1 00 @ —			
Orchard.....	25 @ 30			
Red Top.....	18 @ 20			
Hungarian.....	8 @ 10			
Lawn.....	50 @ —			
Mesquit.....	— @ 25			
Timothy.....	9 @ —			
TALLOW.	Crude, lb.....	7 1/2 @ 8		
Refined.....	9 1/2 @ 10			
WOOL, ETC.	do, No 1.....	9 50 @ 10 50		
do, No 2.....	8 50 @ 9 50			
do, No 3.....	7 50 @ 8 50			
do, No 4.....	6 50 @ 7 50			
do, No 5.....	5 50 @ 6 50			
do, No 6.....	4 50 @ 5 50			
do, No 7.....	3 50 @ 4 50			
do, No 8.....	2 50 @ 3 50			
do, No 9.....	1 50 @ 2 50			
do, No 10.....	1 00 @ 2 00			
do, No 11.....	1 00 @ 2 00			
do, No 12.....	1 00 @ 2 00			
do, No 13.....	1 00 @ 2 00			
do, No 14.....	1 00 @ 2 00			
do, No 15.....	1 00 @ 2 00			
do, No 16.....	1 00 @ 2 00			
do, No 17.....	1 00 @ 2 00			
do, No 18.....	1 00 @ 2 00			

Agricultural Articles.

THOS. POWELL'S ELECTRIC ELEVATOR.



Thos. Powell's Electric Elevator is the most speedy stacker in the world. Money, time and labor saved by the use of this machine, only one minute required to unload the largest header wagon. The entire load is taken up in a

center opening net with a portable derrick. The load is raised by horse power, by the use of this machine, high and large stacks can be built of hay, straw and grain without hard labor or wasting of grain. The time occupied unloading is so short that one derrick with nets will stack for one, two or three headers. The success of this machine is well established from the great and testimonials of the last two seasons. Farmers or those wishing to purchase should not hold back, but send in their orders early to be sure of securing a rig before the rush in harvest time. Orders for machine or price list circular, address,

THOS. POWELL, Patentee, STOCKTON, CAL.
Or H. C. SHAW Flow Co.,

The Famous "Enterprise"

(PERKINS' PATENT)
Self Regulating
WINDMILLS,
Pumps & Fixtures.



These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in habbitted boxes. Positively self regulating, with no coil springs or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

HORTON & KENNEDY,
GENERAL OFFICE AND SUPPLIES, LIVERMORE,
ALAMEDA CO., CAL. Also, Best Feed Mills for sale,
San Francisco Agency, LINTFORTH, RICE
& CO., 401 Market Street.

MATTESON & WILLIAMSON'S



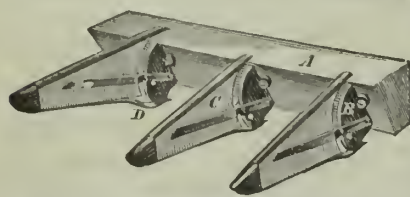
Took the Premium over all at the great plowing Match in Stockton, in 1870.
This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,
STOCKTON, CAL.

ANY PHOTOGRAPHER having a large Camera Box for sale will please notify "N. S." at this office.

BONNEY'S PATENT

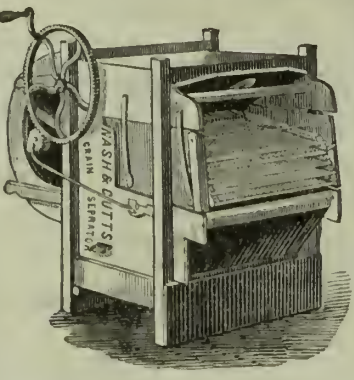
Adjustable Grain Lifter for Headers.



All farmers who wish to save grain without waste in cutting, should examine these. They can be run at any inclination to the ground, as seen at D in cut. Are light, strong and durable, and can be adjusted in 15 minutes, or removed in five when not required, by drawing bolt in malleable shank B. Set of 8 or 10-foot header, (in putting on which bore with 1/4-inch bit for lag screws) are the cheapest and give the best satisfaction of any in use. Parties can save additional cost of a set in one day's cutting, where grain is lodged or trinkles down. Price, \$40. Also, Grain Belts, Header Sticks, etc. Manufactured for
BAKER & HAMILTON,
San Francisco and Sacramento, Sole Agents, Pacific Coast.

THE BEST IS THE CHEAPEST.

NASH & CUTTS' PATENT



GRAIN SEPARATOR AND FAN MILL.

THREE SIZES—Warranted to Clean from
60 to 200 bushels per hour, perfectly.

PRICES—\$40, \$50 and \$75.

The Nash & Cutts' Machine is the only machine that has taken the First Premium at California State Fairs in 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877.

Nash & Cutts' Machine will thoroughly separate Mustard Seed, Cheat, Barley, Oats, Cracked Wheat, etc., from Wheat in a rapid and satisfactory manner.

No zinc sieves used in the Nash & Cutts' Grain Separator and Fan Mill; therefore we can

Clean Faster, Better, and with Less Work and Trouble.

Than any other machine now in use.

The Nash & Cutts' Machine is the only one that will clean Alfalfa Seed. All we ask of any one in want of a Grain Separator is to give the Nash & Cutts' a trial.

EVERY MACHINE FULLY WARRANTED.

The Nash & Cutts' Machine is for sale by all Agricultural Implement Dealers in California.

For further particulars address

NASH & KLUS,

No. 264 K Street, Sacramento, Cal.

Only manufacturers of the Nash & Cutts' Grain Separator for the Pacific Coast.

HAY PRESSES.

JOHN H. GOVE'S PATENT IMPROVED

Centennial & Eagle Hay Presses,

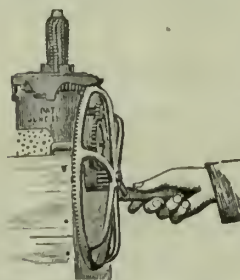
MANUFACTURED BY HIM AT THE

EUREKA WAREHOUSE, NORTH POINT,

Are the best made, combining Strength, Durability, and Compactness. Send for Circular. Post Office Box, 1122. Also, for sale by

David N. Hawley, 201 & 203 Market St.,
Cor. of Main, San Francisco.

Peerless Corn Sheller.



It is so cheap (costing only \$60), that almost any one can afford to buy one. It is so rapid, it will shell almost as fast as a \$40 machine, and seven or eight bushels per hour is not above its capacity. It weighs only 13 pounds and is simple and durable. For particulars, address

WEISTER & CO.
17 New Montgomery St., S. F.

H. H. H.

HORSE MEDICINE,
D. D. T.—1868.

As a horse medicine it is superior to any liniment ever invented. For RINGBONE, SPRAIN, SWEENEY, CALLOUS LUMPS, and all OLD SORES, apply freely so as to blister, from three to five days in succession, and in four or five days, if not cured, repeat as at first. SPRAINS, STIFF JOINTS, BRUISES, WINDGALLS, and all slight ailments, apply a small quantity so as not to blister. Saddle Sores, Cuts, and all other sores where the skin is broken, mix the liniment half and half with any kind of oil, and apply in moderation.

WILLIAMS & MOORE, Proprietors,
STOCKTON, CAL.

American Machine



Experimental and Fine Special Machinery, Planing and Gear Cutting, Printing Press, Band Instrument and General Machine Repairing; Dies, Taps, Punches, Reamers and other Tools made to order. Models and Patterns for Inventors promptly executed in Wood or Metals. 514 Commercial Street, between Sansome and Leidesdorff, Third Floor, San Francisco, Cal.

I. A. HEALD, Proprietor.

S. D. BURBANK, OPTICIAN,

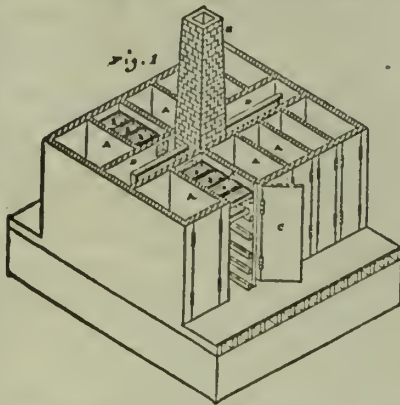
Special Attention to Fitting Eyes.

OFFICE—NICHOLL BLOCK, NINTH STREET,

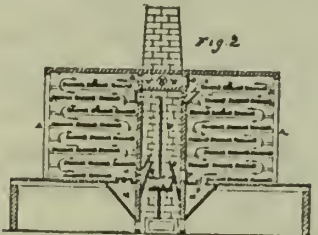
(BETWEEN BROADWAY AND WASHINGTON.)

OAKLAND, CAL.

Blowers' Patent Fruit Drier.



Prospective View, Showing Draft Chimney, Furnace and Drying Rooms.



Transverse Section Showing Heating and Drying Chambers and Currents of Heated Air.

The Only Successful Fruit Drier in the World.

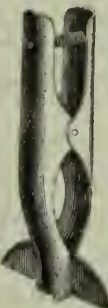
Professor D. M. Mefford, inventor of the celebrated Mefford process of drying fruit and vegetables without loss of color or flavor, says of the Blowers' Drier: "Your Drier is really the only Fruit Drier in the world, and compared with which every drier I have seen (and I have seen them all,) is really worthless for successful factory work. If fruit driers wish to make a success of their work they must use your house."—D. M. MEFFORD, Toledo, Ohio, March 2d, 1878.

For descriptive circulars, address

R. B. BLOWERS, Woodland, Cal.

HATCH'S

FRUIT PITTING MACHINE.



Those who desire a cheap and practical device for pitting Plums, Peaches, etc., will do well to examine the Hatch machine, recently invented and successfully applied. It is simple in construction and operation, and not liable to get out of order.

The fruit is laid on a table and the pitter taken in the hand; by simply striking the knife on the fruit the pit is removed without waste of fruit.

A single motion of the hand will remove the pit.

The machines are cheap and effective and will be found useful to every orchardist and every family. Address for circulars,

Grangers' Business Association,
100 Davis Street, San Francisco.

CALIFORNIA FRUIT DRIER

Awarded the

CALIFORNIA GOLD MEDAL

AND THE

U. S. Centennial Grand Medal & Diploma.

IT IS THE

BEST FRUIT DRIER,

And the only one that proves a success in making the FINEST RAISINS, FIGS, and the Choicest Fruit at the least expense.

Driers of all sizes put up and no pay asked until tested.

GEO. A. DEITZ, Manager,
SACRAMENTO, CAL.

NURSERYMAN WANTED.

A practical and experienced nurseryman is wanted to establish a nursery in a good location in Tehama county. The owner of the land has the best of soil and plenty of water, one mile from the railroad station. He wants a good man to put out a few acres of cranberries, and raise all kinds of ornamental and forest trees. The owner of the land wishes to take an interest in the proposed nursery and believes good sales of trees can be made. Good men, experienced and trustworthy may address us on this subject.

DEWEY & CO.

202 Sansome Street, San Francisco.

25 Fashionable Cards, no two alike, with name, 10c. postpaid. GEO. I. REED & CO., Nassau, N. Y.

Seedsmen.

SEEDS.

SEEDS.

IMPORTED.

Crosby's Extra Early
Marblehead Mammoth
Stowell's Evergreen
Mexican Sweet, New

Sweet Corn.

Early Canada }
Early Dutton } Yellow Flint Corn.

Long Red Mangel Wurtzel }
Yellow Globe } Beet Seed.
White Sugar }

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco

R. J. TRUMBULL & CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

"Guide to the Vegetable and Flower Garden will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,

419 and 421 Sansome Street, S. F.

SEEDS.

TREES.

SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc. Also, a complete assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRENCH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.



B. K. BLISS & SONS,

Importers, Growers and Dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS & SONS, 34 Barclay Street, N. Y.

Nurserymen.

SHINN'S NURSERIES.

NILES, ALAMEDA COUNTY, CAL.

We invite attention to our large stock of

Fruit Trees and Ornamentals,

Of the most approved varieties. Also, Coffee, Cork Oak, Olives, Guavas, English and Black Walnuts, Magnolias, Loquats, Butternuts, Small Fruits, Evergreens, Etc. We have a choice stock of the Diospyros Kaki (Japanese Persimmon), of our own growing, and also, grafted stock imported direct from several Japan Nurseries. Address for catalogue and terms,

DR. J. W. CLARK, No. 418 California St., San Francisco,
Or JAMES SHINN, Niles, Alameda Co., Cal.

SWEET
Chewing

JACKSON'S
BEST

NAVY
Tobacco

Awarded highest prize at Centennial Exposition for fine chewing qualities and excellence and lasting character of smoking and flavoring. The best tobacco ever made. As our blue strip trademark is closely imitated on inferior goods, see that Jackson's Best is on every plug. Sold by all dealers. Send for sample, free, to C. A. JACKSON & Co., Mfrs., Petersburg, Va.

L. & E. WERTHEIMER, Ag'ts, San Francisco



"THE EAGLE CLAW."

The best Trap in the World for catching

FISH, ANIMALS & GAME.

One bait will catch

Twenty Fish.

No. 1, for ordinary fishing, small game, &c. 35c.

No. 2, for large fish, mink, muskrat, &c. 75c.

Sent by mail. J. BRIDE & CO.,

Mfrs., 297 Broadway, New-York.

Send for Catalogue of useful novelties and mention this paper.



A WORLD'S TRIUMPH.

The Current of Trade Reversed.

STEINWAY

PIANOS TO EUROPE.



STEINWAY & SONS Orders From Europe

Have increased to an extent, necessitating the establishment of Warerooms in London, England, and connected with it is a Concert Hall, the whole combined making the most elegant Piano Warerooms in Europe, and stands there as a monument of American genius and industry.

It is impossible to mention in the limited space of an advertisement the innumerable triumphs of this energetic firm. They stand foremost as inventors in Piano building in America, and in that respect, no small compliment to their inventions is the undeniable endorsement of all their competitors, as shown in their imitative efforts. Certain principles of the Steinways, are, however, so completely protected, that no imitation or substitute is attempted at all, and the shallow method of crying such inventions down are resorted to and relied upon.

The Steinways designed and perfected the Overstrung and Iron Frame systems. The application of the Agraffe Arrangements to Square and Upright Pianos. The Patent Duplex Scale, creating the most beautiful treble tones, (the Duplex Scale is of recent invention and only to be found in Pianos sold recently). The improved Double Dampers. The later idea extending the Agraffes to every string in the Piano. The highest finish to all parts of the instrument, including first quality of ivory, ebony, felt, cloth, etc. The wood and varnish of such first-class character, that the employment of large capital and experience alone permits.

The name of Steinway has become a "household word" in American homes, and the satisfactory record of 18 years' trial on the Pacific Coast, in itself assures the purchaser that the investment is no speculation, but one of perfect security.

The oft-repeated story of rival makers claiming to have been Steinways' foreman, etc.,

should have no weight with purchasers. An immense manufacturing business like the Steinway, is divided into departments for the various classes of work, and a foreman of one department superintends that alone, and cannot be perfected in other details.

The Steinways (a numerous family) are the inventors and designers of the principles of their pianos, and are alone responsible for the thorough execution of their own ideas.

In the Machinery Department at the late Centennial Exhibition, Steinways were awarded a special medal for an invention for testing their iron frames under a pressure of 5,000 pounds to the square centimeter. (This award was distinct from their medal for the best pianos exhibited.) The iron frames in Steinway pianos are the only ones so tested, and while other makers rely on castings from an ordinary foundry, the Steinways maintain their own foundry, and manufacture a frame of composite metal, which adds greatly to the resonant qualities of the instrument in general.

It often occurs that the attempt is made to raise the character of pianos constructed on less costly principles to the rank that the Steinway maintains, by naming a price, the same, or nearly so. This method is frequently exposed by the perfect willingness of the dealer to make astonishing discounts for cash, or extremely long credits; systems not entertained in any first-class business. In selling a Steinway piano, a guarantee of worth is given protecting the purchaser for five years, and catalogues issued by the Pacific Coast Agencies have a uniform rate of prices in gold, and where desired a liberal installment plan is offered to responsible buyers, with an additional charge of simple interest on deferred payments. Catalogue mailed on application to

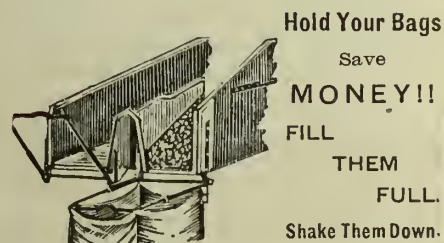
M. GRAY, GENERAL AGENT,

No. 105 Kearny Street, San Francisco.

THE BURDETT, THE "KING OF ORGANS," NEW STYLES AND PRICES

Send for Catalogue. N. B.—Please state where you saw this advertisement.

To Threshers.



HOW? USE THE

"CALIFORNIA SACKHOLDER."

Simple, Cheap,

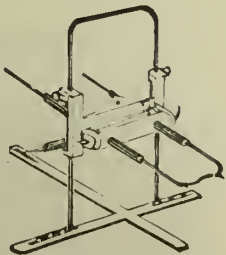
Adjustable to any Size Bag.

LONG,

SHORT,

WIDE,

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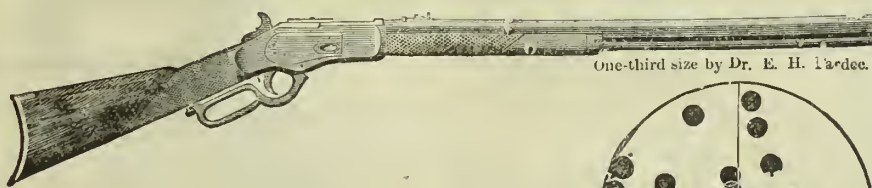
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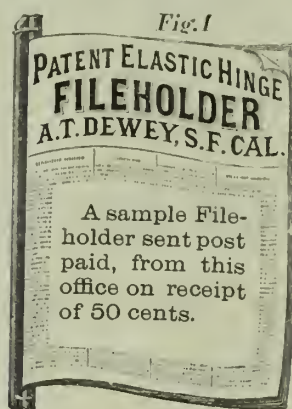
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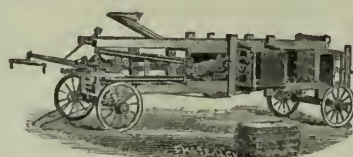
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Volume XVI.]

SAN FRANCISCO, SATURDAY, JULY 20, 1878.

Number 3.

A Plant Pretext for War.

It is commonly reported that the pretext which the Idaho Indians make for beginning the war which is now raging, was encroachment by settlers upon "Big Camas Prairie," upon which grew large quantities of the "camas" bulbs, which the Indians esteem highly for food. The Indian claim that the war was undertaken in this defense of their food resources is strongly denied by the settlers, who assert that the "camas" was only a pretext, and that the war really sprang from the evil dispositions of the aborigines. However this may be, the "camas" becomes a subject of peculiar interest, as being ostensibly the bone of contention, and therefore we choose it and several kindred bulbs and roots for illustration this week.

Camas root or "wild hyacinth" (*Camassia esculenta*) is shown in Fig. 1. This root resembles an onion in shape and a hickory nut in size. It bears a pretty blue flower. The root is dug in June and July. When eaten raw the taste is pleasant and mucilaginous; when boiled it somewhat resembles that of the common potato. The Indian mode of preparing it for future use is to dig a pit, line it with rocks, upon which a fire is made, and, when heated sufficiently, the heated stones are swept clean and the roots are heaped upon them; grass or twigs are next laid over the pile, and, finally, a covering of earth. After several days the pit is uncovered, when the white roots are found to be converted into a thoroughly cooked, dark-brown, homogeneous mass, of about the consistency of softened glue, and as sweet as molasses. Cooked in this manner, the roots are often made into large cakes, by mashing and pressing them together, and, when slightly dried in the sun, they become rather pliable and tough, and look like plugs of black navy tobacco. Its color does not recommend it to the taste, but it is sweet, mucilaginous, and as agreeable as the fresh root, excepting a slight smoky flavor acquired in baking. In this pressed form it keeps softer than in the raw state or when simply cooked, and may be kept for a year or more. The roots, when boiled in water, yield a very good molasses, which is much prized, and is used on important festival occasions by various tribes. The Indians of Cape Flattery, the Nez Percés, of Idaho, and those of Pitt river, California, are the greatest consumers of this article of diet, under the name of camas root.

Konse root (*Peucedanum ambiguum*) is shown in Figs. 2 and 3. The root of this plant is dug in April or May when in bloom. It grows on hills and mountains which are so poor that grass will not grow upon them. When fresh it is like the parsnip in taste, and as it dies becomes brittle and very white, with an agreeable taste of mild celery. It is easily reduced to flour. When its brown epidermis is removed, innumerable small dots are revealed. Both the roots and the flour will keep several months. It is sometimes called bread or biscuit root by travelers, and kouse root by the Indians of Oregon and Idaho.

Prairie potato or "bread root," (*Psoralea esculenta*, Fig. 4.) It is also called Indian turnip, *pomme de prairie* of the French, and tip-sin-nah of the Sioux, who use this root very extensively. It is generally the size of a hen's egg, of a regular ovoid shape, with a thick, leathery envelope, easily separated from its smooth internal parts, which become friable when dry, and are readily pulverized, affording a light, starchy flour. It is of a sweetish turnip-like taste, is often cut in thin slices and dried for winter use, and is very palatable, however prepared. The Indians of Kansas and Nebraska consider this root an especial luxury. The Indians of the St. Croix river offer these roots as a peace offering to the Great Spirit.

Fig. 5 is wild sago (*Calochortus luteus*). The Utahs call it sago. The root is the size of a walnut, very palatable and nutritious. The Indian children of California, Utah and Arizona prize it as the children of the whites do confectionery. The Mormons, during their first years in Utah, consumed this root extensively.

The Idaho Statesman says: "The Big Camas prairie is a beautiful and fertile valley, from 25 to 30 miles in length, with an average width of at least 10 miles. Within these bounds

there is every variety of surface, nearly all of which is susceptible of cultivation. There is no portion of it which could not be easily drained and converted into grain fields if needed. It has all been surveyed into sections at the expense of the tax-payers of the nation, and should be now open and ready for settlement. It lies contiguous to the Overland stage road, leading from Boise City to Kelton, and also to the stage road connecting the Overland road with the mines in Alturas county. Its exclusive occupation by Indians merely for the purpose of hunting and digging roots is impracticable in the present condition of the country, and would prove a source of constant trouble

Bermuda Grass as a Levee Protector.

We have heaped both praise and blame upon the tenacious Bermuda grass which our friend Mr. Rich, of Sacramento, found he could do anything with but kill. In fact its aggressive character seems to be about the only objection to it. Like fire it is an excellent thing in its place, but it is greedy and hard to restrain. Now while our farmers in many parts are mourning the inroads which last winter's turbulent streams made upon their meadows and levees, Bermuda grass creeps into view and

would go the levee. When it was completed, just enough soil was thrown over the surface to give the Bermuda grass root-hold. Mr. Parks was sure that if no freshet came until the grass could take root, the levee would be safe. It proved a success, and not a few have been erected since, and set in Bermuda grass. Mr. Park says: "This grass will stop washes anywhere; I have seen gulleys 10 feet wide stopped entirely by its growth. Thousands of old worn-out fields in Georgia are being brought up by the growth of this grass. It runs on the ground like vines, and every joint takes root, and sends up a stalk and blade that catches everything in the way of sediment and trash. It is used now on the great Mississippi levees, and has proved the most successful of any growth ever tried to hold them from washing away. It is not only a valuable grass for the purposes mentioned, but it is one of the best grasses for grazing purposes in the known world. Hundreds of negroes in Georgia feed their mules on nothing else, and make their crops with them too. This Bermuda grass was brought from the island of Bermuda about 40 years ago, by a cousin of mine, and planted in his garden in Greensboro (Ga.), and from those few grass roots it has spread, until not a town or city in Georgia is without its velvet green skirts over its suburbs, and along the streets and alleys."

Rye-Grass and Liquid Manure.

There were experiments begun some time ago by one of our leading dairymen in the growth of rye-grass, with irrigation through iron pipes laid through the fields, the water being distributed by hose attached to hydrants here and there. It was also designed to apply the liquid manure gained by flushing out the cow barn with water, the floor being tight and sewered for that purpose. We hope at the close of the season to have report of a year's work on this plan. As this experiment is going on it is interesting to mention that a similar plan, so far as the application of liquid manure goes, has been long in practice by Mr. Mechi, a leading English farmer, and he reports excellent results. He thus describes his method and apparatus: "With a pump, worked when required by a strap from our fixed steam-engine, the liquified manure is forced through underground iron pipes to a hydrant, to which is attached some lengths of fire-engine hose. The affair is, in fact, simply a pump to force it, iron pipes to convey it, and leather pipes with a nozzle to distribute it, just as is done from a fire-engine. After clearing a space of Italian rye-grass, we irrigate, and then, in six weeks, it is again 20 inches to 30 inches long. I once made three ton of hay per acre May 31st, and in six weeks the rye-grass was nearly as high as the table. When the engine is at work, either grinding or chaffcutting, we have merely to slip the driving strap on the pump rigger, and away goes the sewage. The solid and liquid manure go together from under the sparrow floors and from the tank. This is decidedly a paying operation. The manure of to-day may be feeding growing crops to-morrow. We get heat and moisture together, so that the growth is tropical. One acre of Italian rye-grass sowed will give as much as four acres unsowed. Mr. Lawes said before the Commons Committee that no amount of ordinary manure, applied during the summer months, could compete with the sewage. It pays best to put it on as strong as the plants can bear it. Every farm which has a fair water supply should have a few acres sowed. Italian rye-grass is a biennial, so that there should be several fields piped. I find it a capital preparation for peas and then turnips, and wheat or barley. My iron pipes 26 years ago only cost me £5 per ton, delivered on the farm, so that each 9-foot length of 3-inch pipe, weighing 1 cwt., only cost 5s., this, of course, in quantities. They are as effective now as 26 years ago, and especially almost as clean as new on the light land."

This is in some respects a more elaborate apparatus than our dairy-man has arranged, but the principle to be tested is the same, and it will be of value to know what results will be gained. Of course the enlistment of so great capital would only be warranted at present in locations where the milk can be turned to better account than is now possible in butter and cheese making.

Fig. 1.

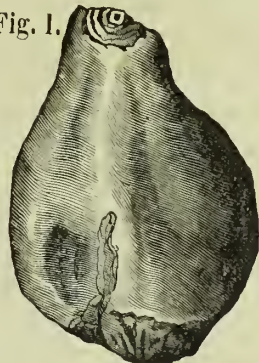


Fig. 2.



Fig. 3

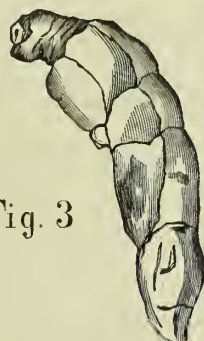


Fig. 4

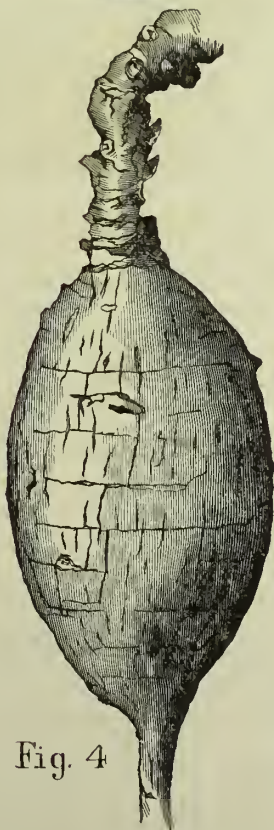


Fig. 5



CAMAS AND OTHER INDIAN FOOD-ROOTS.

and danger. The settlers have thus far used it only for grazing purposes during the summer months, but the advancing settlements will soon make it desirable and necessary for the site of permanent homes. The Indians covet it, not because it produces the camas plant, but because it is contiguous to the roads and settlements. Were it isolated from these, they would never make it a summer resort as they do. As to the destruction of the camas by the hogs, this has merely been used as a pretext for begging and levying contributions upon the whites, as all the hogs that have ever been on the prairie have never diminished in any perceptible degree the yield of the camas root. This year there were no hogs on the prairie, or next to none, while the cattle men and stock raisers were disposed, as heretofore, to share with the Indians whenever they killed a beef, or had other provisions to spare."

promises great things. We cannot do better than give the grass a chance to speak for itself, as it does in a letter of a Georgia farmer, Mr. H. H. Parks, to the *Country Gentleman*. He purchased a farm in Coweta county, Georgia, through which ran the Wahoo creek. The great trouble experienced by the former owners of this land, was the overflowing of the creek during freshets. No small amount of money had been expended in building up the washed-out places along its banks, and building levees. The land being of a sandy quality, none of these obstructions could be made to stand. The first thing Mr. Parks did was to straighten the banks, build up the washed-out places, and set it in Bermuda grass. The next thing was to build a levee at the upper end of the valley, where the creek had washed out a large quantity of sand. Out of this sand the levee was built. Not a few persons prophesied that the first time the creek got out of its banks, away

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eps.

Turkeys, Rice, Wheat in Hills, Etc.

EDITORS PRESS:—Excuse something of a mixed dish in the way of a letter this week about raising turkeys, cultivating rice, experiment with wheat, the cheat or chess in Tulare county, the army worms, etc.

A lady I have met on this trip, living on as dry, barren and lonesome a looking point of the foothills in Merced county, as can be found in all this valley—one, too, who was formerly accustomed to town life with all its attractions—remarked to me somewhat in this wise: "Why, they are all the time saying people can't do anything to make money out here. I find I have been able to raise over \$400 worth of turkeys a year with very little trouble and no expense but my time." In answer to a question how much grain she fed them, she said she fed them nothing whatever!—they lived and grew fat on weeds and bugs alone, one weed especially being

Their Principal Food.

She showed me the weed, telling me that when it is young they eat the whole plant, then as it blooms and seeds continuously through summer and fall, they live upon the seed chiefly. It is a fact and weed worth knowing. The plant is one of the most generally distributed "dry weather weeds" throughout San Joaquin and Sacramento valleys, and indeed through the State generally. Its common name is "mullein," or, in some localities, "abolition weed," a familiar, whitish, hairy, low-spreading weed, not belonging to the mullein tribe at all, but closely allied to the *crotoms*.

For water they depend on what is hauled for household purposes from the Merced river, or what stands in a cut of the Farmers' canal—lately described. This lady assured me she sent 44 fat gobblers last Christmas by rail, via Merced, to San Francisco, and made \$135 by their sale, after paying freight. Yet she has the fewest possible facilities for raising turkeys, or anything else, being in an entirely uncultivated region of the foothills, several miles from any farms or town, the friends with whom she is living being connected with the construction of the Farmers' canal. I saw numbers of her turkeys, old and young, feeding upon this weed and evidently thriving well.

A late RURAL makes inquiries about Rice Culture.

A few miles northeast of Hanford, I have seen lately the first rice patch I have met with anywhere in my rounds through California. It is on a piece of land rented by Col. J. M. Strong, who formerly made such valuable experiments in cotton-raising on Merced river, but who now lives in Visalia. Without having then seen the inquiries, I wished very much to collect some facts about it, but could learn little, except from what I saw, because six or eight Chinamen were in charge, irrigating and freeing it from weeds, with no white man near who was posted. Efforts to gain information from the "Must Gos" were about as instructive as is usually the case when you try to learn anything of value from John. His "no sa-ve" is a sure stumbling-block. But this I can say: There were several acres well prepared for irrigating from a side ditch drawn from the Mussel Slough ditch; the rice appears to be growing well, the plants being from 12 to 18 inches high. I have since learned that the best South Carolina rice was obtained for seed. It is to be hoped that Col. Strong will give your readers full reports of the progress and results of his useful experiments, and your querist can, no doubt, get the desired information by writing to him.

The Experiment with Wheat

Is one of considerable interest as regards light seeding, tried by Mr. James Pursell in his garden, some five miles north of here. The last week in February, he checked off one square rod of well-pulverized soil into square feet. In the center of each square foot he planted one plump grain of wheat, about an inch and a half deep. This was 272 grains to the square rod. After the wheat had attained a safe height, he irrigated it regularly from his well, but he thinks the grain did not get as much water as it would by the usual irrigation from ditches. Results: Fine grain four feet high, heads large, plump, and at regular heights. It has tillered, or stoolled, well, generally ranging from 30 to 90 stalks and heads from each grain, or an average of from 50 to 60. He is carefully saving the heads, and judges from those already gathered, that the yield will be about 30 pounds, or half a bushel to the square rod, which would be at the rate of 80 bushels per acre. From this experiment he concludes that 11 pounds per acre of the best seed, planted at regular depths, with a good drill, whose teeth are a foot apart, would be ample seeding, with proper irrigation. As it is, our farmers generally sow, even where they have irrigation, from three to six times that amount, and without irrigation, in some places even 12 times that amount, or about two bushels per acre. This heavy seeding has, no doubt, resulted from the amount of cracked or otherwise defective seed, from loss of much seed by covering too deep, and a still greater

amount destroyed by birds, squirrels, gophers, rats, and field mice. Speaking of drilling wheat, reminds me of an interesting fact I learned among English farmers, while with them two years ago. They frequently drill their wheat in rows so far apart, that while it is yet low they cultivate and "weed" it by running small plows between the rows. They think it "pays" them to do this.

Cheat or Chess, and Army Worms

Are giving the farmers some trouble here, as they are elsewhere in the State. In some fields where too much water has drowned out or stunted the wheat, that old pest of the farmers, from time immemorial, has taken its place. The variety of this "cheat" here seems to be the same that I have seen at times in my own wheat fields in Stanislaus, Merced and Fresno. It is probably the same species that has been so disappointing to the hopes of the farmers in Sonoma, Napa, Contra Costa and other counties. It is, no doubt, a separate and distinct plant from wheat, as is argued by Prof. Hilgard. It has long been known as such by botanists in all civilized countries.

The army worms, which appeared some weeks ago around Visalia, have been found in greater or less numbers on the alfalfa, the green weeds, cabbages and other vegetables, for the past two weeks, in this fine irrigated country. They are very similar in size, appearance and habits to the army worms which frequently work such destruction in the cotton fields of the Gulf States. The first set that appear early in the summer are not dreaded so much as their numerous progeny later in the season. We see accounts now of their ravages also in Amador and Yuba counties. Here they have done little mischief as yet, though very thick in places. I have sent specimens of cheat and army worms, collected on Maj. McQuiddy's place, four miles northeast of here, to Prof. Hilgard, that he may tell us how they compare with the species found elsewhere. I hope we shall soon hear from him through your columns on these points.

Like many of the older ranches in this Mussel Slough Country.

Maj. McQuiddy's shows how great and desirable a change can be wrought by systematic irrigation in a short time. A large part of this country is now a garden spot, though four years ago almost a desert. The Major's house and yard are well shaded by large gums, figs and other fruit trees. His peach, apricot and plum trees are now in full bearing, the fourth year from the seed. His grape vines and fig trees are loaded with fruit. He has four-year-old orange trees growing well from the seed. He has enough alfalfa, from which, by five cuttings per year, he gets regularly 10 tons hay per acre. In his yard, he has, growing rankly, the only specimens of "poke weed" I have seen in the State. He brought the seed from Tennessee. He gives me the very valuable fact that a wash made from "poke" roots is as effectual a cure for scab in sheep as any wash known. He prefers it to the wash made from tobacco.

More hereafter of the crop here and the great changes made by four years of irrigation and industry.

J. W. A. WRIGHT.

Hanford, July 5th, 1878.

Notes from Ventura County.

EDITORS PRESS:—Ventura county, adjoining Los Angeles county, has a climate very similar, varying as you go back from the sea and ascend the hills. But every part of it has its daily sea breezes, varying much in different localities, and the humidity of the air being much greater near the coast than back, tends to keep it very cool for miles back from the coast. San Buenaventura, the county seat, often abbreviated to "Ventura," for true business purposes is a neat, quiet little town, of perhaps near 2,000 people, counting the Spanish-speaking population, who are yet remaining to study the pictures of American advancing civilization. Their somber adobe with ancient trough tilings are strikingly in contrast with the cheerful adornment of our more modern edifices.

The county buildings are not costly, but neat and plain, and the same may be said of the other public edifices. The public school is quite an imposing structure of brick, occupying an elevated position, and judging by the printed posters of candidates offering their services and desiring to be elected as trustees, it is a very high honor to serve the people and boss the teachers.

Ventura is a seaport town, with its steamer landing or wharf, and would be still more important if not obliged to divide its shipping business with the sister town of Hueneme, 12 miles east, where there is also an excellent wharf and storehouses that claims a liberal share of the farmers' patronage. Daily connection is made with S. P. R. R. by stage to Newhall station, about 60 miles by pleasant route up the Santa Clara river and valley; passing the villages of Saticoy and Santa Paula, and the Camulos Ranchos, the most elegantly fitted up in all its appointments of buildings, with varied fruits and adornments of vines and flowers, of any of the Spanish-American homes, I have yet seen. In the immediate vicinity is a large set-

tlement of Spanish-Californian farmers who are trying to Americanize and use patent implements and are raising good corn and barley.

Soon after passing the Camulos Rancho you will find yourself in deep cogitations, as every advancement up the winding valley changes the scenery, and reveals new and beautiful nooks, valleys and bluffs, with the Jettie river passing by. It seems so strange that there is no house or home for about 15 miles or more, except the Newhall mansion. This vast track of valley and hill land is owned by M. H. Newhall, the well-known auctioneer on Sansome street, San Francisco. The Newhall station is the Ventura R. R. depot.

Here you catch a strong scent of the

Star Petroleum Refining Works,

Located near by, where the steam engine that does their pumping is run by coal oil or some of the lighter products of the refinery. According to Prof. Gunning and other oil experts, this whole belt, from Los Angeles to Newhall and on down nearly to the coast at Ventura, is a genuine oil belt, and when properly developed will be remunerative.

Uses for Petroleum.

All through Ventura county where I have been, the farmer that wants the black tarry petroleum drives to some open flowing spring and dips it up free of charge. It is much used for lubricating purposes and as cure for vermin on hogs. The most convenient method of applying is by making a wallow hole and then pouring the petroleum on top of the water. The hogs have no antipathy for it, but frequently drink some of it. Some attempts are being made to develop flowing wells about midway between Newhall and Ventura. When one enterprise of this character is proved a success, there are scores of locations equally promising, and life and energy would soon be developed in farming, for then a home market would be created for various products.

The Honey Interest.

To a stranger, seeing so much of the county, hills and mountains, with long, steep canyons, all covered with coarse wild bush and weeds, might consider it a worthless waste of land thus piled up by the side of narrow valleys. But in this hasty judgment he finds he errs greatly. The highest bush on those hills is utilized and will this year yield its rich nectar to the busy bee. All along the hills and up the ravines are the homes of beemen cozily housed, and at the distance of a few rods the city of bee-hives and the honey-house are placed. Beekeeping is not the lazy business that some may imagine, for it has its labors and cares, and success and profit mainly depend on proper labor management. If the consumers of honey in the great cities could see the perfection of machinery and cleanly manipulations that takes the honey from the comb free from all impurities and cans it, returning the uninjured comb to be refilled by the bees, it would surely add additional satisfaction to the luxury and maybe increase the amount of sales. Again, when they would see these isolated families losing the benefits of society and schools to harvest this nectar of high mountain flowers, they should quite willingly give a remunerative price for the luxury thus furnished.

The heavy losses in stands of bees by the drouth of last year is probably now made whole, and so far the season is proving a good one. This county now ranks high as a bee county, and claims several very able apiarians.

Land Matters.

The great drawback to this county has been the unsettled titles. Many settlers who supposed they were on government lands found they were within grant boundaries, and left; others became renters and not actual settlers and improvers. If the entire county was free from grant titles and open to purchase in 160-acre tracts, there would soon be an improving condition. Some express the hope that Mr. Newhall may buy the More grant, and some other titles to land in the Santa Clara valley, and then build a railroad from Ventura to Newhall station, and divide up the land in the valley into small farms and offer it cheap to the actual settler. Such an enterprise requires not large capital, as the lands would quickly sell at advanced prices and would be ample security for most of the purchase money, and pay well as an enterprise in competent management.

Present Crops.

This season the wheat grew well, but the prevalence of wet rusted it so that but little will be harvested. Barley very heavy, but so badly lodged that it cannot count for more than half a crop. Corn even on high hills looks well, and promises now a large yield. Fruit a moderate crop, and potatoes and beans very fair.

The drawback is the cost of getting to a cash market. Some make complaint of wharfage at \$1.25 per ton to get to the ocean steamer as exorbitant and oppressive; especially does it show on heavy cheap produce. The good sense of the owners of wharf property will adjust all real grievances of this nature.

The dairy and pork interests are rather lightly represented in this county. Twice within a fortnight has the county seat been out of butter so that the first-class hotels had none on the table—San Francisco sends down some to supply this deficiency. There is plenty of honey, but a lack of milk.

Harvesting is progressing quietly; wages from \$1 to \$3 per day, but many idle men not needed, or not willing to work for the wages given. Owing to the amount of weeds and dampness in the mornings, they find a dump-box header

wagon most convenient, and drive right along with the header till a full load and then dump and keep right on with the header, and each round dump so as to form a windrow. One header wagon thus attends the header; and about five wagons same kind will keep the separator going if well manned. It strikes me the same dump wagon will beat the derrick unloader to drop the straw at the threshing self-feeder. All seem to think it very economical, and both grain and labor-saving. The inventor's name is supposed to be *bono publico*, as it is not patented.

B. W. CROWELL.

Ventura County, July, 1878.

Who is Uncle Josh?

EDITORS PRESS:—The person who regaled us with "A Talk About Manure" in the PRESS of the 15th inst., does not appear to like the way we farmers deal with manure in this State, and he also threw in some gratuitous expressions about a party whom he styles "Dick Slasher," and which I suppose he thought very funny. I should have thought that he would have told us what to do with the manure, seeing that he was so pained about the waste. I suppose that what he said may be true enough, but I must say that I don't think it quite fair for a person to write in the way he did without signing his real name. It looks a little like Indian warfare, shooting at you from behind a tree and you don't know which tree he is behind. I have talked with several of my neighbors about it and I think we can guess who "Uncle Josh" is; but a person who has been several years to an agricultural college, if he has anything to say that is worth saying, he needn't be afraid to sign his name to it.

In conclusion if "Uncle Josh" has anything more to say to us or about us, let him say it like a man and sign it properly, and we will at least respect him the more for it, even if we don't see any sense in what he says.

RICHARD DERLASHER.

Santa Rosa, June 28th.

That Talk About Manure

EDITORS PRESS:—A writer in the PRESS signing himself "Uncle Josh" seems rather disposed to ridicule the California farmers' method of dealing with the manure question. I have heard it said that no person has a right to condemn any particular plan or method of doing a thing unless they can show a better one. Whether this be true or not, I think that "Uncle Josh's" talk would have been more acceptable if he had seasoned it with a few practical suggestions that any plain, common-sense man could have understood. Perhaps he intends to do this in a future number, but if he had just mentioned that he would it would have relieved us of any anxiety on the subject. What he said about the treatment of manure is all true, for I know of many farmers in my immediate neighborhood who are very glad to let the rain wash the manure out of their way, but I suppose that they have found from experience that it don't pay to bother with it. I for one am fully satisfied, from many years' experience, that it does not pay me to spend much time around the manure heap, and I believe that to adopt the costly method given by learned agricultural writers, would be just throwing so much money to the dogs. My land is a stiff adobe and I have tried manure on it and saw no difference in the places where the manure was applied from other places. Perhaps I did not apply it properly. I only keep my stock up during the wet season, and what manure I make is made at that time. I do not store my manure and I suppose that some of it does get washed away. I do not know anyone around here that does store his manure, in fact very few of the farmers have room to store their feed and a man who would store his manure and leave his feed out in the rain would be likely to be laughed at. I scrape up what manure I have in my barnyard and haul it out after harvest, as I have time, and scatter it on the surface, and it is plowed in in the fall. If "Uncle Josh" can tell me of a better way to apply it that does not involve much labor and expense I shall be glad to hear from him.

ANTHONY DRISCOLL.

Santa Rosa, June 29th.

The Enemies of Carp and Precautions Against Them.

EDITORS PRESS:—On the 8th inst. I was very politely called upon by Mr. Oliver, of Forestville, for whom I had stocked a pond with six carp fish, two large ones and four small ones, to investigate his pond. His pond is 66 feet square and, in the deepest place, four and a half feet deep. He said that he thought there was something wrong with his fish and that he had seen a turtle in his pond, and he wanted me to help draw the water off and see what was the matter. I gladly accepted the invitation, and at it we went. When we got the water off, we found that there were three of his small original fish gone and two of the young ones with their tails bitten off up to the first fins. We found 231 young ones altogether, and there were four different sizes of them, showing to me that they spawned as much as four times in the season.

He should have had over 1,000 young ones. We also found in his pond a big turtle and some 10 or 12 what I call "water dogs." I think the turtle is what bit the fishes' tails off and caught his three yearling fish. I also think that the "water dogs" will catch small fish.

I am of the opinion that these and the king fisher is (or will be) our greatest pest on our fish culture. Still there are other things that would devour them if suffered to be with them.

I am of opinion it would pay to fence in our ponds with broad boards, say, one or two feet high, and then one, six inches broad, projecting over on top, so nothing could crawl over, and screen both the inlet and outlet of our water.

I see nothing wrong with my fish, but there are some "water dogs" in the ponds, which may eat some, but I can spare some, and then they will be thick enough for my supply of water.

LEVI DAVIS.

Forestville, Sonoma county, Cal.

[The facts which Mr. Davis sends us will be valuable to all who are trying experiments with fish ponds. The culture is one of great promise and we shall always be glad to receive notes from the fish culturists.—EDS. PRESS.]

THE STOCK YARD.

Arrangements for Live Stock at the State Fair.

Mr. Boruck, President of the State Agricultural Society, gives in the *Spirit of the Times* an outline of what the managers have done to encourage an exhibition of live stock at this year's fair. We quote as follows: It would be difficult to arrange a premium list which was better calculated to effect this object than the one under consideration. The amounts are liberal, exceeding those of former years, and the classification gives every grade and every kind an opportunity. The first department is that of Live Stock, and there are offered over 200 premiums, the whole aggregating nearly \$7,000. Class first is thoroughbred horses, and there are premiums for all ages, also for families; class second is graded horses; class four, draft horses; class five, roadsters; then come carriage horses, road teams, saddle horses, colts, which have not been entered under the other classifications, and sweepstakes for the best without regard to the families. Jacks, jennets, and mules conclude this portion. In all there are 70 premiums amounting to \$2,570.

The cattle are marshaled under the flags of Durham, Alderney and Jersey, Devons, Herefords, Ayrshires, Holsteins, Holderness and graded cattle. The premiums are 69, and the money amounts to \$2,455. It is not likely that in fixing these premiums there was any intention to equalize the amounts given to the horses and cattle, still after deducting the premiums for jacks, jennets and mules, there is very little difference, that for cattle being a few dollars in excess. Inasmuch as we ran up the sums in a hurry a more careful computation might change the figures somewhat, but not enough to make much variation.

Sheep, swine, goats and poultry are duly cared for, and the number of premiums 64, whilst as in the preceding list, there has been due discrimination in the allotment.

Carefully looking over the prizes in this department we fail to see where it could have been materially altered without injury. Whilst it is full, there is not a single premium which is not important, and from foals and calves up to the matured animals there is a place for every animal which has pretensions to excellence. With such an array it is not surprising that many stalls, pens and coops are required, and in these essentials the grounds of the State Society are well furnished. The speed programme necessitates a large number for the horses engaged, and, as by a rule of the Society, the animals which take part in the races cannot be exhibited in families, the stall room is proportionally increased, there having been great additions made since the last fair to the stalls and pens, and in making these the beauty of the grounds has been greatly improved. The angles between the stables and the track on the south, which formerly were occupied with stalls and pens, have been cleared, and the space sown to blue-grass. This has not only added to the appearance, but has increased the comfort of the stalls which are on the southwest corner of the grounds, by giving a free circulation of air. These stalls have been raised and the upper portion made available for the storing of grain and hay and sleeping places for those who have horses in charge. This utilizes for the horses a great many which formerly were used for feed and sleeping rooms. The new ones erected have been built on the wide streets which give plenty of room for the people, and afford walking places for the horses. The pens have been removed to a better situation, and altogether the improvements have been judiciously planned. The supervision has been a "labor of love" to the Secretary, whose long experience taught him the importance of having things right, and also gave him the knowledge of what had to be done to make them what was wanted. To estimate the value of the exhibition which must surely follow this catalogue of awards to the live stock of the State, and also to the whole of the Pacific coast, would require a person of very sanguine temperament, and his figures would be below the mark.

The Feeding Value of Wheat Straw.

A short time since we had articles from numerous contributors on the subject of utilizing straw, and the general verdict was that much good will be done by showing the value of material which is often permitted to waste. By way of strengthening this side of the question we adduce the experience of a Kentucky farmer, as related in the *Rural World*. He says: In the fall of 1864 I had about 40 head of mules, 35 head of cattle, 70 head of sheep, and other stock in proportion, to carry through the winter, and had but little hay. Stock fodder and corn could not be bought in the neighborhood. I became alarmed, thinking of the slim chance of keeping them from starving through the winter. I could not sell them even at a great sacrifice. I remembered some wheat I had and what I been told of the great value of wheat straw as a food, by one—when traveling in the East in 1863—who has been feeding wheat straw exclusively, as hay, for a number of years, and selling his grass hay. As Providence would have it, I had ricked the summer before, off of about 100 acres of wheat, not to use as hay—for I had been erroneously taught that it was worthless—but because many hands around the thrasher were idle, and I did not wish the straw thrown upon my clover. I at once determined to try the experiment. I built a rail pen around each straw rick, with a barn shed attached, and a pond of water in each lot. I put about 25 head of mules in one lot and about 36 head of cattle in the other. I built a pole rack all around each rick, so as just to let the head enter and yet prevent them from tramping on the straw; gave each rick a good drenching of strong salt water, all over, and at the sides and ends, throwing it up under the straw the best I could. I bid them live or die, for it was the best I could do. To my great surprise they ate the straw greedily, and seemed to prefer it to grass hay. The 25 head of mules and 35 head of cattle were not out of that lot during the winter, and lived upon that rick of wheat straw entirely, all winter and spring, except seven bushels of corn, given all of them one very bad, snowy day, and two small loads of grass hay, during the winter, and one load of indifferent stock fodder, given all of them, every two or three weeks, as the opportunity presented.

They came out late in the spring, in about as good condition as mules and cattle that had had a good supply of corn, grass hay, stock fodder, etc., and well cared for during the same time. Shortly after they were taken from the lot I sold them to a drover at the same price as those that had been wintered upon grain, hay, etc. The drover said he could not discover any difference in flesh, appearance, etc.

From that day to this I have been a great advocate of wheat straw hay, and always will be. I have my wheat straw cut as green as possible, so as not to shrivel the grain. This improves the quality of the flour. I have ricked or stacked the greenest straw, sufficient to feed all of my stock abundantly through the winter, and, although I have much timothy, red top, or orchard grass and clover hay cut, I sell this, except the clover hay, and feed the wheat straw to my stock. I sell the grass hay because it will bring more in the market than wheat straw, and not that it is more valuable for food than grass hay.

THE APIARY.

Drone-Killing Birds.

EDITORS PRESS:—I have followed the raising of bees for the last seven years, and made it my only occupation. I, at one time, thought the bee-bird was destroying my bees, and what to do to get rid of them I did not know, for there were hundreds of them in the spring building their nests in the oak timber under which my bees are sitting. After watching them very attentively for several years I discovered they did not eat the working bees, but fed on the drones. Around my house, and for 300 yards below and above, there are small oak trees, under which my bee-hives are sitting. I can sit in my door and see hundreds of bees coming in and going out of the hive, and sitting on twigs are half a dozen bee-birds. They paid no attention to the working bee, but as soon as I would hear a drone I could see one of the bee-birds give a swoop and capture him. A drone is much larger than the honey bee, and they make a louder noise and can easily be seen and heard at a distance. In place of the bee-bird being an enemy to the working bee he is their friend. He is a protector of the poultry yard; a crow or hawk dare not come near my premises. If a stray one should come this way he will be certain not to try it again. The bee-bird is the king and terror of the feather tribe. As soon as they and the honey bees kill off the drones the bee-bird disappears and you see him no more until the next spring. Some people kill the bird-bird and examine his craw and find bees in it and that is sufficient evidence to condemn him, but if they would be more particular they would find the food to be drones. This is my experience and my conviction.

J. J. SIMMONS.

San Joaquin Bridge, July 10th, 1878.

[What is the observation of other beekeepers on this point?—EDS. PRESS.]

Floating Apiaries on the Mississippi.

We read in Eastern exchanges accounts of floating "bee-palaces" which Mr. C. O. Perrine, to Chicago, has set afloat upon the "father of waters." His enterprise is thus described: He has fitted up two large barges. Each barge has a capacity and conveniences for a thousand hives of bees. Mr. Perrine's plan is to start with his bee-palaces and his one thousand colonies from southern Louisiana when the honey flowers are in full bloom, to remain but a day or two at a landing, and move up each night to another landing and a fresh field. He thinks the bees of from one to two thousand colonies will take the cream from the country around the landing from one to two miles distant in one or two days. In this manner he expects to move up the Mississippi to St. Paul, a distance of nearly 2,000 miles, where he will arrive about the last of July.

Returning he will halt about two months above St. Louis, and will reach Louisiana with his palaces and bees in October. It will be his object to take the autumnal flowers at each point in their prime, precisely as he takes the spring flowers in his advances up the river. He expects his early swarms on his boats to increase his colonies to 2,000 in April and May.

The colonies of bees are in hives with movable combs, on the most approved plan of modern hives. These stand in four walls, five hives one above the other, nearly the whole length of the boat, about 250 hives in each line.

The walls of colonies on the right side and left side have openings for the bees to come out on the water front; a space of two feet between the hives and the guards answering for a gallery for the bee-man to walk on, in front of the hives.

In the middle of the boat there are two other walls of colonies 250 hives in each, facing an inner court six feet in width. The bees from these colonies reach the open air through the skylight opening in the roof above the court.

Between the first and second rows of hives from the outside there is an aisle three feet in width, for the convenience of the bee-man in handling the hives and the honey.

The distance from the barge deck to the roof over the colonies is 15 feet.

The space below decks is ten feet in width and about seven feet high, and is to be used for sleeping apartments, making and repairing hives, handling and extracting honey and putting it in marketable shape. The dining and cooking-room will be on the steamer that tows the bee fleet.

To run the steamer and manage the barges and bees, from 15 to 20 hands will be needed. The cost of the whole establishment, barges, bees, steamer and the complete outfit will not be much short of \$15,000.

Mr. Perrine has been engaged in the honey business in Chicago, 12 or 13 years, and has lately made it a special study. He has dealt largely in California honey. He expects to find the best market for his honey in Europe.

HORTICULTURE.

When and How to Prune.

EDITORS PRESS:—"Why do you write on the subject of pruning now," said a friend the other day; "you wouldn't have us prune all summer, would you?" Yes, when I go in the orchard I take my knife with me, and if I see a limb or sucker that needs taking off I do it, without regard to the season. Now I don't say that you had better put off your pruning, at the proper season, to do it by piecemeal in this way; but if you have overlooked or neglected some, or find new shoots where you don't want them, take them off at sight, as it is always in season for such work. But the best time to do the general pruning is just before the buds swell for blooming and leafing out. Then you can see better what you want out, and it saves a waste of growth and puts a greater vitality into what remains. And remember this should be done every year, as long as the tree lives; and it will live much longer and bear better fruit if properly pruned. I frequently cut a limb full of fruit from a tree, when I find one where I don't want it, and a surplus of fruit on the tree. If I find my trees throwing out too many young shoots, I cut them out any time, if convenient; and the tree and fruit is benefited by it. Again, if I see two or more young shoots growing from the ends of the main limbs or stem of the tree, I pinch off the tender ends of all but one, that I want to make the main tree or limbs, and that checks the growth of them so that the one left will get ahead in growth and thus prevent a fork that should not be, and gives the nourishment of the tree to such as need it.

Now with regard to enhancing the production of the tree by pruning, I will give one or two cases out of many to illustrate. Several years ago I took charge of a fruit farm belonging to a nurseryman and orchardist, who had differed with me on pruning; as he did not prune at all. In the farm was a fine thrifty winter nelson pear tree, 10 or 12 years old, that had bloomed regularly for several years, but had never produced any fruit. "Now," said the nurseryman, "if you can make that tree bear fruit, then I will have some faith in your theories."

As soon as I looked at the tree I felt sure that I knew the remedy. With pruning shears I went into it and took out two-thirds of the small limbs at the first pruning, and as the fruiting season came on the tree was full of young fruit. When the pears were as large as cherries I pruned it again, cutting out nearly half of what I had left at first pruning, and the result was a crop of excellent pears, and the tree continued to bear as long as I had charge of it.

Another case was an early harvest apple tree. The tree was thrifty and bore heavy crops, but the fruit was small and ill-shaped, because the tree had never been pruned, and the top was so thick and the apples so numerous that they could not mature. I served this as I did the pear tree, only more so, and thinned the apples as they grew, and was not troubled any more with little nurlly apples.

I mention these two cases as samples, and because these varieties of fruit are inclined to these troubles. The remedy is a thinning out of the numerous small branches and overcrowded fruit.

M. P. OWEN.

Soquel, Cal.

Finger-and-Thumb Pruning.

EDITORS PRESS:—Those of our nurserymen who favor us with directions for tree culture in their catalogues advise that, in the winter pruning of fruit trees, from one-third to two-thirds of the previous year's growth be cut away. Is this economical management? It seems to me like the way many men use their hogs. Let them get in fair order part of the season, and then let them fall off again in flesh. In fact it is Californian style all through. Our cattle, sheep, and even our dairy cows are used the same way.

It seems to me the better plan would be to look over the trees in the growing season, and when the shoots have attained the desired length, just to nip out the points. The strength of the tree would then be largely thrown into the permanent wood, instead of being used up in maturing lengthy shoots that are to be cut off in winter. Moreover, the fruit buds would probably be more numerous and better developed.

Nipping-in too early in the season causes the development of too many laterals, but in the right season it seems to me a very beneficial practice. Cannot some of our nurserymen give us a little of their experience in the *RURAL*? On account of last season's drouth fruit buds on plums, peaches, etc., did not seem to mature properly, and fruit failed to set this spring. I feel sure Mr. Felix Gillet knows all about finger-and-thumb pruning; perhaps he will record his practice. I have to thank him for a copy of his little work on "Fragriculture," kindly sent me some time ago.

EDWARD BERWICK.

Monterey, Cal.

Proposed Railway to Yellowstone Park.

The *Railway Age* looks with distrust upon a project mooted in Omaha. A company has been incorporated in Nebraska with the ambitious object of building a railway to be called the Omaha & National Park railway, from Omaha via the Niobrara valley to Yellowstone park. This great national pleasure ground, it may be necessary to remind our readers, lies in the northwestern corner of Wyoming Territory, and is a tract of land 55x65 miles in extent, near the center of which lies the Yellowstone lake, a body of water 15x22 miles in size, with an elevation of 7,427 feet above the sea. This region, which has wisely been set apart by Congress for the public, comprises some of the most sublime and astonishing natural features to be found on the earth, and in the course of time as the means of access are improved, it will be the resort of wonder seekers from the four quarters of the globe. The project of a railway from Omaha, however, is almost chimerical. The distance is at least 800 miles, and while the route up to the Niobrara valley nearly to the Wyoming line is practicable, the remaining half of the distance is largely a wild, mountainous, barren, unpeopled country, through which a railway will be, for decades at least, only a dream. It is not supposable that the projectors of the "Omaha & National Park railway" think seriously of such a destination as the name indicates. The National park, however, will, before many years, be accessible without difficulty, as the proposed line of the Northern Pacific railway runs up the Yellowstone river through Montana, to within 50 miles or so of the Wyoming line, and the prospects for the completion of that great enterprise now seem encouraging.

EXPORT OF AMERICAN IMPLEMENTS.—One of the best markets for American implements for husbandry is South Africa. There we compete with Great Britain as well as in her other colonial possessions in Australia and New South Wales. These British possessions and Germany are the largest markets for American hoes, shovels, forks, etc. The trade centers we have not yet reached direct are Austria, Denmark, the East Indies, China, Italy, Spain, Turkey and Greece. In South America our best markets are the Argentine Republic, Chile, Colombia, Uruguay and Peru. Cuba and Porto Rico use quite a number of our implements, but the Dutch and French West Indies San Domingo and Hayti know nothing of the American plow.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Worthy State Lecturer's Appointments.

The State Lecturer will visit the following Granges on the day and date herein given, prepared to hold a private meeting at each Grange for the good of the Order, and also a public meeting at such hour as each Grange may determine, to which public meeting everybody is invited. We bespeak for Bro. Pilkington a most hospitable reception and large turn outs, and those who can ought not to miss hearing him on Grange topics, for he discusses them with an earnestness and ability positively his own.

Name of Grange.	County.	Time.
American Valley.....	Plumas.....	Tuesday, July 23d
Indian Valley.....	Plumas.....	Thursday, July 25th
Plumas.....	Lassen.....	Saturday, July 27th
Surprise Valley.....	Modoc.....	Tuesday, July 30th
Eagleville.....	Modoc.....	Thursday, August 1st
Cedarville.....	Modoc.....	Saturday, August 3d
Northeast.....	Modoc.....	Monday, August 5th
Modoc.....	Modoc.....	Wednesday, August 7th
Davis Creek.....	Modoc.....	Saturday, August 10th
Crescent City.....	Del Norte.....	Wednesday, August 14th
Rivellutah.....	Humboldt.....	Saturday, August 17th
Sable Bluff.....	Humboldt.....	Monday, August 19th
Ferrdale.....	Humboldt.....	Wednesday, August 22nd
Mattale.....	Humboldt.....	Friday, August 23d
Cahito.....	Mendocino.....	Tuesday, August 27th
Potter Valley.....	Mendocino.....	Thursday, August 29th
Lakeport.....	Lake.....	Saturday, August 31st
Cloverdale.....	Sonoma.....	Monday, September 2d
Healdsburg.....	Sonoma.....	Tuesday, September 3d

Recovery of Money Lost by Grain Shipments.

EDITORS PRESS:—At the time of the unfortunate failure of the firm of E. E. Morgan's Sons, in 1874—the firm which, for about 14 months, under Mr. Walcott's management, were shipping agents for the Grange in California, and whose failure was caused by the well-known and strong combination against them—it was noised abroad and made capital of to the greatest possible extent, to injure the good cause of the Grange everywhere. The loss to farmers on part of cargoes, amounting to about \$110,000 in all, was exaggerated to many times that; being run up in some instances to millions, with the object of weaning farmers from ever again trying to handle their products with some independence, according to their own wishes and interests.

This being the case, Why Is It. That so little notice has been taken by newspapers in general of a late decision of the Supreme Court of California, by which part of that loss to the farmers has been made good?

It was by the merest accident lately, that I learned the following facts from a farmer and a good Patron, who has recovered his loss by that decision, and I beg leave to make them known through your columns.

It will be remembered by many that suit was commenced by several against Daniel Meyers—into whose hands Mr. Walcott's assets passed—to recover their losses amounting to some \$60,000. A decision in one of the lower courts was made in favor of the farmers, but Mr. Meyers appealed to the Supreme Court. The final decision has given the farmers judgment for \$60,000, with interest to date, the latter about paying costs of suit. So that the farmers concerned have recovered their \$60,000 after having been deprived of the use of it for a few years. No doubt, if suit were brought for the remaining \$50,000 or thereabouts, with interest, it could be recovered, if the claims have been kept in proper condition.

Among the teachings of our good Order, we are wisely admonished to

Learn from Our Failures

As well as our successes. The Rochdale pioneers of England had, in their early history some years ago, a lesson similar to ours in their loss of some \$65,000, in connection with a cargo of wheat which they bought. They profited by this sad lesson, they placed greater safeguards around their business transactions, they went on more zealously than ever in their efforts. Their perseverance and final success laid the foundation for the truly great work of the 1,000 and more similar co-operative societies of the United Kingdom, whose combined trade amounted last year to over \$80,000,000—quite a bonanza in its way—all from small and humble, but sure beginnings, just as the oak grows from the acorn.

Now, at least

Two Lessons are Taught

By this final recovery of part of the money lost by the breaking down of the shipping firm which enabled the farmers of California to realize hundreds of thousands of dollars, while it was at work for them.

1. Had Mr. Walcott's assets been turned over to the Executive Committee of the State Grange instead of to Mr. Meyers, the suits would not have been necessary, for the losses would not have occurred. 2. After Mr. Meyers had obtained possession, if the amount lost had been made good to the losers by the brotherhood, as was proposed by the Executive Committee, the injury to the good name of our Order would have been avoided, and the amount could have been eventually made good by such suits as have now recovered the \$60,000.

By this course, our farmers' great Order, which will I trust, be perpetual in its existence and benefits, as it was designed to be, would have been strengthened instead of weakened by this one failure in the midst of many successes—a failure which our enemies everywhere have made a great cudgel to beat us with, though it was not near so bad as they generally represented.

Far be it from me to allude to this matter for the purpose of throwing blame upon any one connected with our brotherhood, or to "open wounds afresh." I merely wish to make known facts which will no doubt be gratifying to friends of the farmers' cause, as they have been to me, and to point out, in a fraternal spirit, two lessons by which I trust we may all profit in future transactions. J. W. A. W.

Tulare county, July 12th.

Delegates to the Constitutional Convention.

SACRAMENTO, July 12th.—The Governor to-day issued his proclamation, declaring the following named persons to have been chosen members of the Constitutional Convention:

County Delegates.

For Alameda—Alex. Campbell, Jr., Daniel Inman, Jno. G. McCallum, Wm. Van Voorhees, J. V. Webster.
 Amador—Jno. A. Eagan, W. H. Prouty.
 Butte—Josiah Bouche, M. R. C. Pulliam.
 Calaveras—J. B. Garvey.
 Colusa—B. D. Glasscock.
 Contra Costa—Hiram Mills.
 Del Norte—James E. Murphy.
 El Dorado—Henry Larkin.
 Fresno—S. A. Holmes.
 Humboldt—Wm. J. Sweasey.
 Kern—V. A. Gregg.
 Lake—A. E. Noel.
 Los Angeles—Edward Evey, Volney E. Howard, J. P. West.
 Marin—Hugh Walker.
 Mendocino—F. O. Townsend.
 Monterey—N. G. Wyatt.
 Napa—Robert Crumch.
 Nevada—C. W. Cross, Hamlet Davis, John McCoy, John T. Wickes.
 Placer—S. B. Burt, J. A. Filcher.
 Sacramento—James Caples, P. Dunlap, A. C. Freeman, Thos. McConnell, T. B. McFarland.
 San Benito—E. Nason.
 San Bernardino—R. S. Swain.
 San Diego—Eli T. Blackmer.
 San Francisco—Clitus Barbour, Charles J. Beerstecher, Peter Bell, John D. Condon, Patrick T. Dowling, W. Luke Doyle, Samuel J. Farrell, Jas. R. Freud, Jos. O. Gorman, Wm. P. Grace, Thomas Harrison, Conrad Herold, Wm. P. Hinghey, Peter J. Joyce, Bernard F. Kenney, Chas. R. Kleine, Raymond Lavigne, John F. Lindow, Thomas Morris, Henry Neunaber, Thorwald Nelson, Chas. C. O'Donnell, James O'Sullivan, Jas. S. Reynolds, Chas. S. Ringgold, H. S. Smith, John C. Stedman, Charles Swenson, Alphonso Vacquerel, Patrick M. Wellin.
 San Joaquin—J. R. W. Hitchcock, David Lewis, Justis Schomp, David S. Terry.
 San Luis Obispo—George Steele.
 San Mateo—W. S. Moffat.
 Santa Barbara—Eugene Fawcett.
 Santa Clara—D. W. Harrington, Thos. H. Lane, R. McComas, E. O. Smith, J. R. Weller.
 Santa Cruz—Daniel Tuttle.
 Sierra—H. K. Turner.
 Solano—J. M. Dudley, Joel A. Harvey, S. G. Hilborn.
 Sonoma—J. M. Charles, G. A. Johnson, W. W. Moreland, C. V. Stuart.
 Stanislaus—T. D. Heiskel.
 Sutter—George Ohleyer.
 Tehama—Henry C. Wilson.
 Tulare—J. C. Brown.
 Tuolumne—John Walker.
 Ventura—C. G. Finney.
 Yolo—John M. Rhodes.
 Yuba—D. H. Cowden, J. F. McNitt.

Joint Delegates.

Contra Costa and Marin—(Joint) Thomas H. Estey.
 El Dorado and Alpine—J. E. Dean and G. W. Hunter.
 Mariposa and Merced—G. M. Hardwick.
 Mariposa, Merced and Stanislaus—L. F. Jones.
 Mendocino, Humboldt and Del Norte—J. N. Barton.
 Mono and Inyo—Patrick Reddy.
 Napa, Lake and Sonoma—H. C. Boggs.
 Nevada and Sierra—E. Barry.
 Plumas and Lassen—E. P. Soule.
 Plumas, Lassen and Butte—A. H. Chapman.
 San Diego and San Bernardino—Horace C. Rolfe.
 San Francisco and San Mateo—L. D. Morse.
 San Joaquin and Amador—W. L. Dudley.
 Santa Cruz, Monterey and San Benito—Wm. F. White.
 Siskiyou and Modoc—J. Berry.
 Siskiyou, Modoc, Triunity and Shasta—D. C. Stevenson.
 Solano and Yolo—Charles F. Reed.
 Trinity and Shasta—A. R. Andrews.
 Tuolumne and Calaveras—R. M. Lampson.
 Yuba and Sutter—J. H. Keyes.

Delegates at Large.

For First Congressional District—John S. Hager, John F. Miller, Joseph P. Hoge, Morris

M. Estee, Eugene Casserly, Joseph W. Winans, Samuel M. Wilson, Wm. H. L. Barues.

Second Congressional District—Henry H. Haight, Henry Edgerton, J. B. Hall, J. M. Porter, Walter Van Dyke, Hugh M. La Rue, James E. Hale, Rufus Shoemaker.

Third Congressional District—Isaac S. Belcher, Marion Biggs, James McM. Shafter, A. P. Overton, Benjamin Shurtleff, W. J. Tinnin, W. F. Heustis, John M. Kelly.

Fourth Congressional District—John Mansfield, W. J. Graves, P. B. Tully, G. V. Smith, J. J. Ayers, E. Martin, Byron Waters, George W. Schell.

AGRICULTURAL NOTES.

California.

ALAMEDA.

RUST.—Livermore Herald: Nearly all the late sown grain throughout the valley is more or less rusty. The disease occurs only in spots, however, and does not affect an entire field. No early sown grain is affected in the least.

BUTTE.

EXCEPTION TO RUSTY REPORTS.—Record, July 6: We are gratified at being able to chronicle an item in opposition to the numerous complaints of rust in wheat. Mr. Leininger, of Nord, visited our office this morning. He informs us that he is engaged in harvesting 600 to 800 acres on the red land, which has yielded an average of 34 bushels to the acre. Some 200 acres on the black land near Nord he thinks will not go over 15 bushels to the acre. His son-in-law, John Bowman, in Tehama county, near the Butte county line, has 400 acres that averages 38 bushels to the acre. Uncle Ben Bliven is harvesting a crop inside of the race track, which is yielding largely, and is estimated at 50 bushels to the acre. Wiley Cooper has about 10 acres adjoining the town, known as the "Eaton tract," which is estimated to yield over 60 bushels to the acre. In view of the many items concerning rust, these facts afford an agreeable contrast. The wet winter was favorable to crops on the higher red land, while being fatal to grain sown on the black land.

CONTRA COSTA.

THE HARVEST.—Gazette, July 13: Little or no wheat threshing has yet been done in our section, but the reapers are everywhere busy and the promise of a good crop yield is assuring. Some injury has been suffered from rust, but it is not so serious as it was feared it might prove, and the Tassajara section, according to report, has suffered from this cause more considerably than any other of the county.

EL DORADO.

COUNTY FAIR.—Republican, July 13: The premium list for our county fair, which takes place September 10th to 13th, has finally been published in pamphlet form and can be had at the office of the Secretary. Over \$2,000 in premiums is offered. The classifications are as follows: 1st, Live Stock; 2d, Machinery, Implements, etc.; 3d, Mechanical Products, Inventions, Designs, etc.; 4th, Textile Fabrics, Mill and Domestic Products; 5th, Agricultural Products; 6th, Fine Arts, Juvenile Department. The premiums offered on live stock are especially liberal, ranging from \$3 to \$15. On poultry 16 premiums are offered, ranging from \$2.50 to \$5. It is now but two months until the fair will take place, and it is hoped that the people throughout the county will show their appreciation of the successful efforts of the Board of Managers in getting suitable grounds in readiness for the occasion, by a general attendance, and by exerting themselves in helping to make a creditable display of stock and farm products.

FRESNO.

THE STATE SURVEY.—Expositor, July 10: On Monday last, a surveying corps, under the supervision of A. G. Warfield, Jr., Assistant State Engineer, started for Fresno for the purpose of commencing the survey for a system of irrigation for the San Joaquin and Tulare valleys, in accordance with the provision of the "act to provide a system of irrigation, promote rapid drainage, and improve the navigation of the Sacramento and San Joaquin rivers." Work will be first commenced on King's river, and will be extended to Kern river and Tulare lake. The survey will embrace a complete instrumental examination of King's river, and all the country susceptible of irrigation from it. The party consists of 10 men. They are equipped and prepared with excellent camping arrangements. The party will be in the field until the winter drives them in. Mr. Warfield will endeavor to meet everybody in this valley interested in irrigation matters, and endeavor to gain ideas and experiences on this subject. Major Warfield bears a high reputation as an engineer, and is well posted on irrigation matters, having traveled through India, China, Japan, Italy, Southern France, and Egypt, and personally examined the irrigation systems of those countries. The problem of irrigation is of the greatest importance to this State, and its solution will be greatly facilitated by the investigations and theories of the State Surveyors. Every facility should therefore be given them by the people generally.

LAKE.

CROP PROSPECTS.—Bee, July 11: Crop prospects have changed much for the worse in Lake

county during the past few weeks. Rust has attacked wheat and many fields are nearly worthless. That sown early has not perhaps been very seriously affected, but late sown wheat will be seriously damaged and some entirely destroyed. This is the first time, we learn, that rust has ever affected crops in this county to any extent, and farmers are at a loss to know the cause of it now. The haying season is now about over, and a very large crop has been cut, so large in fact, that it is not likely to bring remunerative prices for the present. The corn crop is generally good, and if no disaster happens to it, a full average crop will be raised. Potatoes promised exceedingly well until recently. The army worm has recently appeared in several localities and much damage is apprehended from its ravages, but we hope the danger anticipated may not be realized. The fruit crop will be a large one, and of excellent quality. The only trouble in this line is, that there are not more orchards in full bearing. Grapes are doing splendidly, and will bear a very full crop.

MARIN.

HAY PITCHING DEVICE.—Journal, July 11: We saw a device at Mr. James Miller's ranch, Las Gallinas, the other day, which is at once simple, inexpensive and very effective. The hay is collected in cocks, weighing about a ton each, and is drawn to the barn with a hay drag, or "go devil," which, as the same is used to lift the hay into the mow, must be described. It is very simple: A horizontal bar, eight or ten feet long, having about five teeth inserted parallel with the ground, and on the top a perpendicular frame, consisting of two uprights and a cross bar. At either end of the horizontal bar is attached a rope, long enough to clasp the sides of the cock, and looped in front, to take the whiffletree. Run the teeth under the hay, draw the rope well around the sides, and the cock may be drawn any distance without losing a straw. The pressure of hay on the upright frame lifts the teeth, and prevents their catching on the ground. Precisely the same method pitches the hay into the highest part of the mow. The cock is now in front of the barn door. Attached to the further rafters, close to the roof, is a rope with two tackles, or pulleys, one of which is run down and hooked to the load. The hoisting rope passes through another pulley, set in the front timbers of the barn, a little one side, to be out of the way, and thence under a roller, near the ground, to make the pull convenient. If the barn floor is higher than the ground in front, build an incline for the drag to run on, and as the hay rises in the mow, lay a few loose boards on it, parallel with the pulley ropes. Shift the drag, to face up the mow, start your Clydesdales, and in a jiffy your load of hay is housed. Mr. Martin Miller originated this device, and has used it three seasons. He can bring up from the field and stow in the barn, 50 tons a day, with three less men than it would take to run the work by the old method, and accomplish one-fifth as much. The only outlay is the cost of the rope and pulleys. It appears to us that many of our ranchers might adopt it, and effect a great saving of labor.

MENDOCINO.

COAST CROPS.—Beacon: Crops down coast are looking well, and are giving a large yield. Many farmers in the vicinity of Cuffey's Cove will commence digging their potato crop this week.

MONTEREY.

HUGE WHEAT.—Index, July 11: Dr. W. P. L. Winham has shown us a sample of some remarkable wheat grown this season on a tract of land, owned by himself and John Markley, in the northeastern outskirts of town. It is of the White Australian variety, and has very long heads. But what is chiefly remarkable about it is the fact that, in a large proportion of the heads, each pod has five plump and well developed kernels, being equivalent to ten rows of kernels to the head! This seems incredible and we would scarcely have believed it, had we not seen it with our own eyes. The wheat was planted just before the first rains last fall, on the strong alkali soil that would not raise barley, but which has turned out to be the best wheat land in the world. They have some 40 acres of the wheat, and will save three or four acres of the best of it for seed.

THE VALLEY CROPS.—The wheat harvest has commenced in the Salinas valley, and many fields are turning out better than was expected. Mr. S. M. Shearer has shown us samples of the new crop from several localities in the vicinity of Gonzales, where the yield ranges from seven to ten sacks per acre. From Gonzales down the valley will be much better.

SACRAMENTO.

BREAD FRUIT TREES.—Record-Union: A correspondent sends us the following: In the northwestern corner of the capitol grounds stands a bread fruit tree (the carica papaya). There were formerly two of these trees, which were growing finely, standing the changes of our climate well, but for some reasons they were removed in the fall of the year, when the frosts were coming on—the gardener not knowing their habits. One died and the other survived the shock, and is now about eight feet high and doing very well. This remarkable tree is worthy of more attention from our experimental fruit growers, for its fruit and other properties. The fruit is pear-shaped, from three to five inches in length, and two to four inches in diameter, flavored somewhat like a cantaloupe. It is sliced and eaten raw, or soaked in water to destroy the juice, then boiled and eaten as a

sauce with lemon juice, with which it makes an excellent conserve. Its juice extracted from the pulp makes an excellent cosmetic, removing freckles from the skin, and the leaves are sometimes used instead of soap for washing. Dr. Browne, in his "Natural History of Jamaica," says the toughest meat or poultry may be made tender for cooking by steeping for eight or ten minutes in the milky juice of this tree. Dr. Holden, who witnessed the effect in the Island of Barbadoes, says in the third volume of the "Wernerian Society's Memoirs," that the juices of the tree cause a separation of the muscular fiber in meats that have been immersed therein, and that the vapor of the tree does the same, it being common for the people to hang meat in the top branches before cooking. The "Annales de Chimie," a French work, states: "Fibrine had been previously supposed to belong exclusively to the animal kingdom, but that this tree had been found to contain this substance." It is a prolific bearer. One tree will supply a large family with an abundance of fruit.

SAN JOAQUIN.

CHICORY.—*Independent* July 12: A chicory factory has been recently built on Brandt's ranch on the river, west of French Camp, and the old factory has been removed to Martin Ott's place, a mile or two further up. From these active preparations for business we judge that the industry of making chicory is flourishing and extending.

TOBACCO CULTURE.—We mentioned a few days ago an experiment in the culture of tobacco being made by A. Dangers, of Roberts Island. The item was made from a cursory view of the plants from the deck of a steamer while passing the ranch. Mr. Dangers was in town yesterday, and informs us that he has two acres of tobacco planted, nearly all of which is doing finely. A few of the plants were injured by an excess of water, but he is confident of having a fine growth. Fred Opitz, who lives with Mr. Dangers, is attending to the plants, and will cure the leaves by a new process, which he patented two years ago while experimenting in tobacco culture in San Diego county. His experiments were a failure in the south on account of the poor quality of tobacco raised in that apparently unfavorable climate. He has faith in his process for curing, and with the luxuriant growth which the plants attain in the tule, he is confident of turning out a good merchantable quality of the weed. He will commence curing it in two weeks. We shall look forward to the result of the experiment with considerable interest.

EXPLOSION AND LOSS OF LIFE.—Serious accidents on the harvest field are startlingly frequent. On Wednesday, a portable Ames' threshing engine belonging to Dick Richards, and in operation about three miles south from Grayson, exploded, instantly killing one man, fatally wounding another, and seriously injuring a third. The man killed had half his head knocked off, and the man supposed to be fatally wounded had a deep gash cut in his head, and the third man received a blow on the cheek from the flat side of a piece of the metal blown out of one end of the boiler. One horse was killed, and the water-wagon blown off some distance. Both ends were blown out of the boiler, and a portion of the bottom torn as if it had been cloth. The damaged engine was brought to this city yesterday by the steamer *Constance* and shipped on the steamer *City of Stockton*, to San Francisco for repairs. We are told that the report made by the explosion was heard at a distance of several miles.

GRAIN YIELD.—It is generally admitted that the grain crop of the San Joaquin valley will be greater this year than ever before. Although the rust has been very injurious in some localities, and some fields have been damaged by overflow, the larger portion of the wheat-producing lands of this valley under cultivation will yield more than an average crop.

SAN LUIS OBISPO.

RECOVERY FROM RUST.—*South Coast*, July 10: We were informed a day or two since by Mr. Isaac Gamble, that last spring he sowed about 10 acres of wheat, and during the recent foggy weather it was attacked by rust, and to all appearances completely ruined. He had given up the idea of harvesting it, as the blades had either been eaten from the stalks or voluntarily dropped off. But a few days ago he concluded that he would examine the grain and see if it could be made any use of, and to his surprise found that each head was well filled with plump and rounded kernels, though the blades had been blown from the stalk before the blossom had set in. Will anyone explain this singular phenomenon?

FLAX CUTTING.—*Tribune*, July 13: The large average of flax in Los Osos valley will make a magnificent yield. An ugly weed, called by the farmers "yellow-top," a first cousin to the much despised tar weed, has started up since the flax headed out, and now in many places overtops it. It will be a great annoyance in the harvest, but is otherwise harmless to the crop. The flax is ripening fast and the cutting, which will mostly be done with headers, will soon commence.

RUST.—The scare that existed in this section some time since in regard to rust in wheat seems to have abated in a great measure, and we have reason to believe that the crop will turn out much better than was calculated upon. It has been found upon close examination, in many fields that were supposed to be almost totally ruined, that a fair average crop will be gathered. We have been at some pains

to procure reports from different sections, and the summary stands about as follows: In San Jose valley a full crop of both wheat and barley; Las Tablas, no rust anywhere, a full crop; Salinas, the same; on the coast near Cambria, no rust. Around this city and near the Arroyo Grande the farmers suffer most, yet we have assurances that over half a crop will be realized.

SOLANO.

THE HARVEST.—*Dixon Tribune*, July 13: About 875 tons of grain had been received up to Friday morning, of which 560 tons had come in this week. Most of it is wheat, and only a small part barley. Among the farmers who have been hauling are R. Hall, Dan Mann, D. Shaw, Dudley, West, Anderson, Stuart, Brinkerhoff, Van Buren, Agee, Cook, Peters, Henry Meyer and John Meier. The last named was the first to get a load of wheat to town. As a rule the wheat is light weight this year. It is worse shrunken than expected. Some weigh as light as 116 pounds to the sack, and the average is probably less than 150. At Batavia, only a small quantity of grain had been received previous to this week—mostly McCune & Garnett's, which was turning out quite well as to weight. Between 500 and 600 tons have been received at Foster's station. Mr. F. estimates that the amount stored there this year will be fully 3,000 tons. From Elmira, we only hear that the crop is turning out very poorly. In the Vaca valley the yield is probably light also.

GRAIN FIRE.—A fire broke out Tuesday afternoon in Mr. Agee's grain-field, four miles north of Dixon. Mr. Agee was engaged in threshing, and about an hour before the fire had moved his engine from the place at which the blaze originated. A strong south wind was blowing at the time, and the flames swept northeast with great rapidity. About 400 men quickly gathered at the scene of the conflagration, and by great exertions succeeded in controlling the fire, thus abating what at one time threatened to be the most disastrous fire that ever occurred in this vicinity. The loss will probably not exceed \$800 or \$1,000, most of which will fall on Mr. Burns, whose farm adjoins that of Mr. Agee.

SONOMA.

FRUIT CANNING.—*Santa Rosa Democrat*, July 13: This is getting to be a business of more than ordinary importance in California. The fruit canning company of Santa Rosa will, this season, if they can obtain the fruit, put up 100,000 cans for the market. They have already contracted with Messrs. Stanley & Thompson for the manufacture of 25,000 cans, and that firm are now at work on them, turning out, from the hands of one man alone, from 500 to 600 cans per day. If sufficient fruit, of the quality desired, can be obtained, the company will run their canning establishment to its utmost capacity and may reach 150,000 cans. This is an institution that Santa Rosa should encourage and sustain in every way possible, as it will prove a great incentive to an increased culture of fruit in Sonoma county.

PILING THE BANKS OF RUSSIAN RIVER.—*Healdsburg Enterprise*, July 11: The heavy rains of the past winter raised the water of Russian river to an unusual high mark, and considerable land bordering on that stream in this part of the county was washed away, causing a loss of several thousand dollars to quite a number of farmers. Robt. Marshall, whose farm is located on the river, between Healdsburg and Geyersville, informs us that his loss of land from this cause, has amounted, during the past two years, to about \$2,000, the greater part being taken the past winter. He has just completed a large pile-driver, 32 feet high, with 1,100-pound hammer, and is having piles made at Powell's mill for the construction of wing dams on his land. This will not only protect him from farther loss, but will probably recompense him to some extent by making new land on his place, from the deposits of sediment. Mr. Carmichael, whose farm is near Marshall's, will also use the pile-driver on his place. No doubt many farmers will soon follow the example.

VENISON.—*Petaluma Argus*, July 12: The time for the protection of deer having expired on the first of the present month, our umrods are already inaugurating an active campaign against this swift-footed and graceful game. Several parties from this vicinity are now in the Russian river and coast woods, where deer are supposed most to congregate. Mr. Ben Franklin returned to town yesterday from a short trip to Austin creek, where he bagged four fine bucks. Under the new game law sportsmen are allowed to hunt deer some two months earlier than formerly, but are restricted to the killing of bucks, it being declared a misdemeanor to kill a doe at any time for a period of four years from the passage of the act.

THE CROP OUTLOOK.—*Enterprise*, July 11: A gentleman who has visited every part of the county says the wheat crop, generally is light, especially from Fulton to Petaluma. The yield will average better in the vicinity of Geyersville than in any other section, many fields there averaging 30 bushels to the acre. The best field our friend saw in the county belonged to Mr. Galloway, of Dry creek, near Healdsburg, which turned out 50 bushels to the acre. Fruit is quite promising. Pears are looking splendidly and the market is well supplied with the earlier varieties. Peaches are doing better than was anticipated. Trees in the low and ill-drained grounds suffered severely from the extreme wet season, but on the foothills the orchards are in the best condition. The peach crop in Alexander valley is as large as usual, and the fruit is exceptionally fine, both in ap-

pearance and flavor. Heretofore most of the fruit from this valley has found a market at Reno and other mountain towns, and we suppose this season's crop will be sent in the same direction. Throughout the county grapes are in the best condition, and the yield will be probably as heavy, if not heavier, than ever before. Corn never looked more promising, and the prospect for a large crop was never better. Root crops, generally, are doing well, beets being especially forward. Insects have attacked the potatoes in some sections, but take the county throughout, the prospect for an average crop is encouraging. The blight has struck the potatoes in the Bodega country, and the indications are that it will prove very destructive. Some of the largest producers say that a frequent change of seed potatoes is the best safeguard against the blight or other disease.

DANGER IN LATE SOWING.—*Healdsburg Flag*, July 10: It is proven without a doubt that grain sowing after April 1st is precarious business, almost certain to be accompanied by loss in the long run. It is the opinion of experienced farmers that a loss of two crops in three may generally be expected. As we go to press we learn that in this section late sown grain of all varieties is more or less affected by rust, and that down the river several fields of otherwise fine grain will not pay to cut.

STANISLAUS.

GRAIN.—*Cor. Independent*, July 12: It is estimated that the average yield per acre will be from 20 to 25 bushels. One thing unusual on the plains this year is the prevalence of rust. Old residents say this is the second time rust was ever seen on the sand. Although some late sown grain is badly rusted, it does not seem to injure the grain to any extent. As a general rule, wheat raised on the sand plains is remarkably sound and plump.

Oregon.

CATTLE EXPOSED TO INDIAN ATTACKS.—*Willamette Farmer*, July 5: An exchange says that there must be eighty or ninety thousand head of cattle and horses left exposed to the depredations of the Indians by the recent outbreak. The area of country where all this stock ranges embraces the Snake River valley, Big and Little Camas Prairies, Raft river, Dixie valley and Bruneau valley. This estimate includes about 19,000 head of cattle that were on their way to Cheyenne from eastern Oregon, and which had reached Camas Prairie and vicinity at the time the troubles commenced. Many horses have been driven off, but the cattle, with the exception of those slaughtered for food are still on the ranges, but unprotected in most instances, and no doubt badly scattered. The stockowners who have thus been driven from their homes and brokeup as it were, will never return as long as the Indians remain in the country. They will not again trust their lives and property where the Indians are permitted to roam; nor would a peace and the coercion of the Indians on reservations restore confidence in the minds of these settlers. They have been deceived too often.

News in Brief.

A CHAIN-GANG is to be organized in Santa Rosa.

COL. FAIR, of Bonanza fame, is rusticated at Santa Cruz.

THE army worm is destroying vegetation in Trinity county.

GRASSHOPPERS are devouring every green thing around Reno.

OUTPUT of coal in Great Britain and Ireland, last year, 132,000,000 tons.

LAST week there were, in New York city, 732 births and 672 deaths.

THE Stockton Insane Asylum has all the patients it can accommodate.

PIPES are being laid in Russia from the petroleum wells to the Black sea.

A SOAP mine has been struck in Richmond district, near Tuscarora, Nev.

TRAMPS are becoming troublesome in Iowa, and other sections of the northwest.

FROSTS did great damage to garden stuff on the ranches of Alpine county last week.

"THE squirrels must go," is the burden of the farmers' cry in southern California.

By the recent strike the Lancashire mill owners saved over \$3,000,000 in wages.

THERE was an earthquake shock at Santa Monica on Wednesday night of last week.

THE outlook for hop growing about St. Helena is better this season than for several years past.

A DISPATCH from Calcutta reports that 4,700 houses have been destroyed by fire in Mandalay.

A MOVEMENT is on foot to organize a Society for the Prevention of Cruelty to Animals in Sacramento.

JOSEPH E. LAWRENCE, a California pioneer and journalist, died at Flushing, Long Island, July 15th.

THE Assessor of Los Angeles county reports an increase of half a million dollars in taxable property for 1878.

SIXTY female employees of the Patent Office have been discharged because of the reduction in the appropriations.

NEARLY 5,700,000 immigrants have arrived in this country since 1847, 4,000,000 of them being Germans and Irish.

THE heat has become fearful in St. Louis, Mo. On the 15th inst. 150 persons were prostrated by sunstroke, between 40 and 50 of these cases proving fatal. Like casualties have happened in many other Eastern cities.

CASES of drowning seem to be very numerous in the East the present summer.

THE first carload of Bartlett pears from California have arrived in New York.

THE funeral of Isaac Friedlander was very numerous attended last Sunday.

A VALUABLE diamond has been washed from the gravel, at Myrtle creek, Oregon.

FOUR hundred and sixty Mormons have arrived in New York from Europe.

THREE men were killed by the explosion of a boiler at Queen City, Texas.

THE amount coined at the U. S. Mints during the year ending June 30th, was \$81,118,921.50.

THE assessment roll of Santa Clara county foots up \$57,280,730, that of Sonoma \$15,460,754.

SEVERAL deaths in the Eastern States have been reported daily from lightning during the past week.

THE great four-mile washout on the Colorado desert has been repaired and trains commenced moving again.

HOEDEL the attempted assassin of Emperor William is to be beheaded. He was insolent and defiant.

A FAMINE is reported in the State of Sonora and Sinaloa, Mexico. At Mazatlan there is no flour, and people are emigrating.

A GREAT conspiracy against the Sultan is reported discovered in Stamboul, and over 50 persons have been arrested.

PRINCE PETER, of Aldenburg, condemns universal military service as the cause of socialism and general discontent in Germany.

W. C. RHINELANDER, late of New York, gives, by his will, \$49,975,000 to his four children and \$25,000 to five orphan asylums.

THE whipping-post has been re-established in Delaware and Virginia; stripes to be inflicted for petit larceny and other minor offenses.

LATEST advices received from Brazil are that, in the provinces of Ceara in that Empire, the number of deaths from famine exceed daily 100.

THE exact cost of the construction of the Paris exhibition buildings and grounds is now estimated at 45,300,000 francs, or \$9,060,000.

JOSEPH MAZZIO, a native of Switzerland, died near Sacramento last week from sunstroke, the thermometer standing at the time at 115° in the shade.

CONTINUED rains with wind and sultry weather create fears of damage, both from lodging and rust, to the wheat crop of Minnesota.

IN the city of New York last week Dr. Carver shot and broke 5,000 glass balls in 500 minutes, but came near losing his eyesight by the feat.

THE recent storm at Pittsburg and vicinity was the most disastrous one, in loss of life and property, which has visited that locality for years.

WILLIAM SUTCLIFFE of New Orleans, who a few weeks ago defeated Frank Pointze in a 24-mile swim, was drowned in the Mississippi river since.

THE British government has cancelled an order for 40,000,000 cartridges, and various other indications point to a stoppage of war preparations.

THE body of Guy Stewart, the boy who was reported missing from Dayton, Nev., about three weeks ago, has been found in the Carson river.

SEVERAL Sutter county farmers, who have threshed their crops, find that the yield per acre is much less than estimated, it averaging from 10 to 12 bushels to the acre.

A RECENTLY stolen safe, with its contents, valued at \$270,000, belonging to Michael Richard, or Rathrockville, Pa., has been recovered, with everything intact.

EDWARD SPENCER, the founder and chief proprietor of the *Western Morning News* in England, and his two sons, were drowned recently while bathing near Plymouth.

THERE were 2,470 failures in the United States during the last three months, with \$48,753,000 liabilities, against 3,355, with \$82,078,000 liabilities during the first three months of the year.

A NEW vein of coal has been struck in the Carmelo mine, Monterey, which averages seven and a half feet in thickness, and the deeper they go the more the quality of the coal improves.

THE *Dandolo*, one of the most powerful iron-clads in the world, was successfully launched at Spezia, Italy. She will be armed with 100-ton Armstrong guns, carrying projectiles of 2,500 pounds weight.

IT is probable that the maximum amount of standard silver dollars authorized to be coined by the silver bill, \$4,000,000 per month, will be turned out at the mints for the next four months.

MRS. CALIFORNIA CORNWELL, the mother of five children and the wife of James F. Cornwell, a prominent sheep raiser on the San Benito, committed suicide at her residence Saturday morning, while in a state of temporary insanity.

THE value of the exports from the United States last year exceeded the imports to the amount of \$251,000,000. During the last four years we have exported nearly \$600,000,000 worth of merchandise more than we have imported.

STATEN island is a picture of desolation, the contrast between the present aspect and that of last year being most marked. Only a few persons are cultivating any portion of the island, potatoes being the only crop cultivated at all. The levees have been repaired, and are believed to be stronger than ever before.



The Mosquitoes of the Joaquin.

BY VIATOR

(An Attack on the Pests, not the Places.)

1. The mosquitoes of the Joaquin,
—There's just no use o' talkin',
Are not the sort for balkin',
By any common ways.
So sure as you go among 'em,
—I wish that Kearney'd hung 'em
They'll bleed you nights and days!
2. The mosquitoes of the Joaquin,
With loud songs and with bills keen,
Can soon make a fat man lean
By tricks queer and ways dark,
Your sleep is broke in the middle,
When they begin to fiddle.
They "climb the trees and bark!"
3. Your mosquito-bars are nowhar,
Somehow the "skeeter" 'll be thar.
It's a fact, sir, on the squar!
He's bound to get inside.
Once I had a friend that tried it,
And know he never lied it;
He says they "plugged" his hide.
4. There, at Grayson and Hill's Ferry,
These pests are vicious very,
It's frightful how they merry
A fellow out of sleep.
You may woo Morphens with toddy,
No use! they'll take your body;
Pray well your soul to keep.
5. Our friend had real lively times,
While he fought, and heard their chimes,
Lay, and fumed, and planned these rhymes,
Thinking of the Joaquin.
When he arose, soon after dawn,
Hundreds there, though scores were gone!
—Just no use o' talkin'!
6. He tried his "level best" to sleep,
Nor "slept a wink," till dawn did peep;
While scores of pests their vigils keep,
He fought, and thought, and tossed on.
Was e'er the like found anywhere,
For sounds and bites, or sounds by pair?
—Unless it be "in Boston?"
7. He thought of songs celestial,
"Jubilee," and "Festival."
This, he says, was best o' all, (best of all?)
—This music of the wings.
Babies' cries, when they are tooting?
Thunder-storms? Oh! they're soothing!
But this was not, "by jings!"
8. He recalls the Anvil Chorus;
He thinks of things that bore us,
Bad as an ox can gore us,
—Though on a smaller scale;
And while many a siren sings,
Dreams the world's full of things,
That sting with bill or tail!
9. Settlers, they say, never mind it,
Though rough all strangers find it,
For they all get badly bit!
I call such things a curse.
You think not? Well, you just try 'em!
Talk of "perdidi diem!"
Perdidi noctem's worse!
10. Ye who live without muskeeters,
And such devourin' creeters,
Sing hallelujah meters,
For blessings ye enjoy!
Don't stay long on Joaquin river;
You'll have a healthy liver,
And sleep without alloy.
San Joaquin Valley, July 2d, 1878.

Loss and Gain.

[Written for the RURAL PRESS by FAITH FREMONT.]

It was a beautiful, quiet spot. A low rambling farmhouse nestled among grand old elms and maples. Luxuriant vines clambered and twined about the broad old-fashioned porch, and the air was redolent with the perfume of roses. On a low couch lay a girl, pale and delicate as some wild flower, her head propped up with snowy pillows, her thin hands folded upon her breast, while waves of shining nut-brown hair fell all about her shoulders.

Hearing a step upon the gravel walk, she turned her face toward the gate, while her eyes lit up with an expression of pleasure.

A young man was walking leisurely toward the house, and his pleasant face and easy grace of manner at once prepossessed you in his favor. Approaching he knelt beside the girl, and taking the white hands outstretched to him, cast a look full of tender pity upon the beautiful face as he gently asked,

"Are you better this morning, Gracie?"

"I feel no pain, Roy, only a great weariness and an intense longing for rest. You are very kind to come here to help me to pass the long weary hours away, but I feel that I shall not need even your presence to make me happy e'er the springtime comes again."

"Do not say that, Gracie. It is like a knife piercing my heart; I cannot, will not give you up. God will not take you from me. You are dearer to me than all the world beside; He must not—"

"Hush, Roy! God's ways are not our ways; He is merciful and kind, and all things He doeth in His infinite wisdom. Life has been very full of sorrow and suffering for me, but He has never failed me, His arms have been round about me and angels have ministered unto me. Still,

there was a time when the thought of leaving all here was bitter indeed; a time when my heart bled and cried out that I might be spared this cup. But that is all passed, and, dear Roy, much as I love you, I am longing, oh, so much, to pass the golden gate of my heavenly home.

"Grace, I cannot believe that we must part. You are better to-day than you have been for weeks, and you will continue to gain strength as the summer advances, and in the balmy autumn days, when Nature is so dreamily beautiful, we will travel southward, and the warm sun of that genial clime will kiss the roses into your cheeks once more.

"It cannot be," she answered, "do not deceive yourself with false hopes. The end is coming and you must prepare your heart to meet it with resignation."

"Dear girl, try to rid yourself of those gloomy forebodings. Let us talk of something more cheering. We are to have a picnic to-morrow in Brendon wood and all anticipate a day of rare pleasure. How much I regret your inability to be with us."

"Do not let the thought of me cloud your enjoyment; I shall be happy knowing you are so, and I am never lonely here. They are all very kind to me, and aunt Ruth is the best of nurses."

"I am fully aware of that Grace, else I should not leave you so much to her care; but I must not stay with you this morning, much as I would wish to, yet there is so much to be arranged and attended to to-day, and we are all so busy over there. But promise before I go, Gracie, that you will not let those despondent feelings take possession of your mind again, and that you try to be hopeful for the future as I am. Will you do so?"

"I promise to be all that you wish, Roy," she answered, as he pressed her hands at parting, a great love shining in her eyes the while. Years after he remembered the look which accompanied her words, and the almost glorious beauty which shone in her face. He passed out at the gate and a turn in the walk hid him from view, while pitying tears stole down her cheek and dropped slowly upon the clasped hands, and sobs shook her delicate frame as the rough winds toss a frail flower.

"Oh, poor Roy! you will suffer so keenly; miss me so much. My Heavenly Father if it were possible that—Oh, God! forgive me, is my sinful heart still clinging to earth after all my struggles, am I still unresigned to Thy will? Savior lay thy healing hand upon my heart, oh help me to say in very truth, 'Thy will be done.' No anguished heart ever yet sought consolation at the foot of the cross and received it not. 'Come unto me all ye that labor and are heavy laden, and I will give you rest.' Years ago Grace Wilmot had heard and accepted the blessed invitation and the promise had never failed her yet, and did not fail her now. Calmed and strengthened, she fell quietly to sleep as a wearied child might rest upon its mother's breast.

The following morning the sun rose in cloudless splendor, and all Nature awoke with smiles and gladness. The day promised to be unusually fine, and at an early hour the gay party of pleasure seekers resorted to Brendon wood, every preparation having been made the day before for a grand time amid the giant trees of the fine old place. No lovelier spot could have been selected, and all came prepared to contribute to the enjoyment of the day. Among them Roy Norman moved, scattering pleasant words and smiles, for his ready wit and agreeable manner made him a general favorite, and many a pretty face grew rosy with pleasure as he stopped to exchange common-place remarks or passed a harmless compliment.

But no one could appropriate any especial part of his attention to herself, since he was kind and agreeable to all alike.

Yet it was observed when not engaged in conversation, a shade of sadness would steal over his face, and he seemed oblivious to the gay voices and laughter around him.

In truth, he could not shake off a certain undefinable dread, a sad foreboding caused by his visit to Grace the previous evening. True, he had hoped against hope, and had been, or tried to be, blind to the evidence of his own eyes. Hoped only because despair would be so bitter. He saw, day by day, the sweet face grow thinner, and the slender hands weaker, and lately the delicate limbs had refused to support her slight weight. It all rushed through his mind with terrible distinctness, and the certainty of the great loss so near, made it almost impossible to wear the mask of careless gaiety above his aching heart.

At last the long day drew to a close and the happy groups dispersing, returned homeward.

Riding leisurely along the shadowy forest road, Roy's thoughts settled upon the painful subject which had disturbed them so much throughout the day. Memory ran back to the time when he first saw Grace Wilmot, then a pale, thoughtful child of ten years. How well he remembered the sad face and down-cast eyes of the orphan, brought by Mrs. Archer from the distant city, where her only sister, Grace's mother had died.

Mrs. Archer was a bustling worldly woman, but possessed of a heart warm and tender, and this one sister of hers had been very dear to her, and when the little girl was left so entirely alone, for her father had died in her infancy, Mrs. Archer received her "little Maggie's" child," as she called her, with open arms, and took her into the warmest corner of her large heart. Childless herself, she lavished all the wealth of her mother-love upon Grace.

Thought flew over time's highway and Roy saw her budding into glorious womanhood, fair as a water lily, with a queenly grace and a mind rich in all that beautifies female character. It was at this period of their lives that they both awoke to the sweet knowledge of how dear each had become to the other, and how necessary each were to the other's happiness. He knew her to be of humble parentage and possessed of a home only through the charitable kindness of her relatives; while his own family ranked among the oldest and wealthiest in the country, yet he deemed wealth and position as little compared to her intrinsic worth and nobleness of character. But just as she was ripening to most glorious womanhood her health, always delicate, gave entirely away, and consumption, that dread foe of the human race, seized her and was bearing her surely and swiftly to the grave.

She was fully aware from the first that her days on earth were numbered, and that divine religion, which had been her chief consolation through so many trials, was now her stronghold in this last ordeal. It was a bitter struggle between earthly love and heavenly; but in the end "that peace which passeth all understanding" enveloped and filled her heart to complete fullness, and she waited calmly and resignedly for the summons of the Master.

She had endeavored from the first to impress upon Roy's mind the certainty of their separation, but he utterly refused to believe. It seemed to him an evil too great to occur, and his strong young heart battled mightily against the overwhelming thought. But her conversation the previous evening, together with the gradual, though plainly perceptible change in her appearance, had aroused him to a keen sense of the impending sorrow, and all his being rebelled and cried out in bitterest agony. To give her up, the one love of his life! The pearl of all womankind! Must she go down to the tomb hidden from his sight forever?

He was aroused from his sad reflections by a cracked voice close beside him saying—

"Sorry to trouble you, Mr. Norman, but will ye please come over this eve'nin'?" Mrs. Archer think as how Miss Grace is kind o' sinkin' or somthin', and she hears her a wisperin' somthin' about ye sir, and Mrs. Archer she thought mebbe you wouldn't mind riding over a bit, sir."

It was Mr. Archer's "chore boy," Jim, and Roy saw at a glance there was more in the boy's mind than he dared to express, and, without a word, he wheeled his horse and rode rapidly in the direction of the farm-house. Arrived at the gate, he flung himself from the saddle and walked with all the composure possible to assume toward the house. At the door he met Mrs. Archer, with troubled, tear-stained face.

"How is Grace?" he asked, in tones slightly tremulous in spite of all his self-control.

"I fear she will not last till morning. She has sank rapidly since noon." He waited to hear no more, but passed into the room. A single glance convinced him her Aunt Ruth's fears were well-founded. Her eyes were closed and a deathly pallor was upon her features. She slightly stirred, and unclosing her eyes, lifted them in pleased surprise to his face.

"Oh, Grace! my poor darling, are you much worse," he pleaded pitiously, falling upon his knees and clasping the cold hands.

"The end is very near, dear Roy," she whispered faintly. "I am passing swiftly and painlessly away. I thank the dear Savior that the hour is at hand. Kiss me, beloved, once more; and, oh, do not grieve so. It is so sweet to go beyond this vale of sin and sorrow. God will comfort you and bring you safe home to me at last, where there is no death, neither sorrow nor crying for the—"

Her voice ceased, and she seemed to have indeed passed away, while a low wail of bitter anguish filled the room.

Presently the eyes unclosed and the sweet voice repeated clearly and distinctly,

"Jesus can make a dying bed
Feel soft as downy pillows are;
While on his breast I lean my head,
And breathe my life out sweetly there."

A smile of infinite peace and joy settled about the sweet mouth, and, with the last word, the pure spirit of Grace Wilmot took its upward flight toward the Eternal City.

The grief-stricken Roy arose, gave one long, lingering look, through blinding tears, upon the beautiful face, kissed once and again the faultless lips and marble brow, then left the weeping relatives with the dead.

One week after that never-to-be-forgotten evening, he bade adieu to old scenes and associations, and sailed for distant lands, hoping, amid new and untried fields, to find some alleviation to that crushing burden of sorrow, which seemed indeed too heavy to be borne.

Years have passed, and we find him still a wanderer in search of the rest time has failed to bring, and the blight which fell upon his young hopes is none the less keenly felt, though time has strewn silver thickly in his hair. Yet, through all the weary pain, his heart tells him always his great loss is Grace Wilmot's eternal gain.

A FRENCH lady, who was on her first visit to England, was walking in Kew Gardens, the other day. She was, on the whole, much pleased; but was greatly shocked at the notice which she read at every turn, that "Bird-nesting is strictly forbidden." "How severe you are and cruel in this country," she at last sorrowfully exclaimed, "that not even the little birds may not make their nests in your public gardens!"

Scrap-Book Paste.

EDITORS PRESS:—Seeing an inquiry in the RURAL of June 22d for a paste for scrap-books, I give with pleasure my method of making paste and using it. Put a teaspoonful of laundry starch in a teacup with just enough cold water to moisten it and make smooth; then fill the teacup with boiling water, stirring briskly. It should be very thick. This I use immediately, and as I generally work at my scrap-book two or three hours at a time, can easily make fresh paste when needed again. This does not make the paper in the least stiff, and I always put my book under press after having finished for the time, so that it dries smoothly. I use an old toothbrush or any soft brush to apply the paste with. Have also a smooth board beside me on which to place the scraps for pasting, and a cloth wrung quite dry out of hot water to wipe the surplus paste from it each time. I also separate short pieces from the rest so that I can easily select from them to fill up a column if necessary, and keep straight columns. My great grievance is that I am not allowed to clip from the RURAL PRESS. I have often thought how nicely I would arrange the RURAL'S pages for preserving the "Home Circle" and the numerous recipes and other matters of particular interest for reference, but I hardly think the RURAL'S editor would thank me for turning everything topsy turvy in the office, so will keep the improvement to myself for the present.

A. E. P.

Cajon Mountains, July 8th, 1878.

THE LITTLE SHOES DID IT.—A young man, who had been reclaimed from the vice of intemperance, was called upon to tell how he was led to give up drinking. He arose but looked for a moment very confused. All he could say was, "The little shoes did it!" With a thick voice, as if his heart was in his throat, he kept repeating this. There was a stare of perplexity on every face, and at length some thoughtless young people began to titter. The man in all his embarrassments, heard this sound, and rallied at once. The light came into his eyes with a flash—he drew himself up and addressed the audience; the choking went from his throat. "Yes friends," he said, in a voice that cut its way, clear as a deep-toned bell, "whatever you may think of it, I've told you the truth—the little shoes did it! I was a brute and a fool; strong drink had made me both, and starved me into the bargain. I suffered; I deserved to suffer. But I didn't suffer alone—no man does who has a wife and a child, for the woman gets the worst abuse. But I am no speaker to enlarge on that; I'll stick to the little shoes. It was one night, when I was all but done for, the saloon-keeper's child holding out her feet for the father to look at her fine new shoes. It was a simple thing; but friends, no fist ever struck me such a blow as those little new shoes. They kicked reason into me. What business have I to clothe others with fineries, and provide not even coarse clothing for my own, but let them go bare? says I; and there outside was my shivering wife and blue-chilled child, on a bitter cold night. I took hold of the little one with a grip, and saw her chilled feet. Men, fathers! if the little shoes smote me what must little feet do? I put them, cold as ice, to my breast; they pierced me through. Yes, the little feet walked right into my heart, and away walked my selfishness. I had a trifle of money left; I bought a loaf of bread and then a pair of little shoes. I never tasted anything but a bit of that bread all the Sabbath day, and went to work like mad on Monday, and from that day I have spent no more money at the public house. That's all I've got to say—it was the little shoes that did it."—*Albany Press.*

WIFE FATTENING IN AFRICA.—Speke remained in Karagwe for a month, but Grant was detained there by serious illness until the spring of 1862, when he rejoined his comrade in Uganda. During their stay with Bumanika neither of the explorers saw cause to change the first opinion they had formed of that chieftain's personal character, but more intimate intercourse with him showed that he held many strange and superstitious beliefs, and indulged in practices the reverse of civilized. One of the latter, which appears to have struck Speke most unpleasantly, was the fattening of the women of the court to such an extent that they could not stand upright. Scarcely able to credit the reports he heard of this peculiarity in the royal females, the English leader obtained an interview with the king's eldest brother and his wife. On entering the hut, he found the old man and his chief wife sitting side by side on a bench of earth strewn over with grass, and partitioned like stalls for sleeping apartments. The wife could not rise, and so large were her arms that between the joints the flesh hung down like large loose-stuffed puddings. This result, the husband triumphantly informed his guests, had been obtained by milk, and milk alone. "From early youth upwards," he said, pointing to rows of milk-bowls on the ground, "we keep these pots to our women's mouths."—*Heroes of South African Discovery.*

A LITTLE girl was reproved for playing out doors with boys, and informed that, being seven years old, she was "too big for that now." But, with all imaginable innocence, she replied: "Why, the bigger we grow the better we like 'em."

Chaff.

How to manage a menagerie: In winter stable 'em. In summer, Barnum.

The sword may be less mighty than the pen; but how about the scissors?

"Do fish sleep?" is a scientific question. "If they don't, what are they doing in the river's bed?"

SAID an Irishman, in the course of an eloquent speech: "Mr. Chairman, the gals is the boys to do it."

LITTLE boy at the opening of a proposed spelling match: "Let's start fair, grandmother, you take Nebuchadnezzar and I'll take cat."

If you would be clear and forcible, don't use foreign words. Be natural. A man never stops to hunt up a foreign word when he is stung by a hornet.

A SAILOR put a saddle on hind part before. A bystander showed him his error; but the sailor exclaimed, "How do you know which way I am going to ride?"

John and Ida, married,
Lived in Idaho forlorn,
'Cause John hung round that tavern
And let Idaho the corn.

A POLITICAL speaker accused a rival of "unfathomable meanness," and then, rising to the occasion, said: "I warn him not to persist in his disgraceful course, or he'll find that two of us can play at that game!"

FOLKS who can't understand why robins are sent to eat up all the cherries should remember that in all probability the robins can't understand why human beings are sent to do the same thing.

PROFESSOR: "Can you multiply together concrete numbers?" The class are uncertain. Professor: "What will be the product of five apples multiplied by six potatoes?" Freshman, (triumphantly): "Hash."

The Siamese Twins Outdone.

Eastern exchanges are filled with descriptions and engravings of a pair of twins *a la Siamese*, which excel their prototypes. The following is a description of them: The St. Benoit twins are two distinct and separate organizations. They have two perfectly formed and natural heads and bodies as far as the last rib. Below that the two bodies are fused into one. Each has two arms, but only one leg. When a pin is thrust into the right leg the right girl will cry, while the left girl continues her previous occupation—generally a broad smile. Other experiments show that each of the twins is entirely separated from the other, and one may be sleeping while the other is laughing. They have but one abdomen, but the heart and upper intestines in each are separate and independent.

When taken to the library both began to cry heartily in the same tone, and when one stopped, the other stopped, and when one thrust its chubby fist into its mouth the other did the same. At first they refused to allow the spectators to examine them, notwithstanding the coaxing of their mother, and they cried so much that she was compelled to take them back to a private room, where after awhile they became quiet. When ushered into this room the visitors found one of them fast asleep, while the other was wide awake and laughing. Shortly the sleeping one woke up and began a plaintive "cry," in which the other joined heartily.

The twins were born at St. Benoit, about 30 miles from Montreal, Canada, where their parent and grandparents, who are descended from the original French settlers of the country, have resided for nearly a 100 years past. They are seven months old, perfectly healthy, handsome, and, judging from appearances, have the same chance of life as ordinary children. The parents have one other child, a girl two years old entirely free from blemish, and the present twins are the first instance ever known of any "freak" of nature in the family. One of the twins has been christened "Mary" and the other "Rosa" Mary is slightly smaller than her sister and has a darker complexion.

TRAMPS.—"What shall we do with our tramps?" is the question that seems to have prominence east of the mountains. Several towns in Iowa have adopted a system that is said to be working very well, and whilst it gives employment at a very small remuneration it prevents loss of life—on behalf of the tramp—loss of property by fire and larceny on behalf of the citizens. The county authorities have erected a cheap kind of barracks, where tramps are allowed to sleep on benches or on the floor; no beds or clothing being allowed them, and if they choose to work upon the streets they are boarded and paid—if good service is done—25 cents per day in addition. In many instances the labor of these men is leased by the citizens at a nominally higher rate, who put them to work in their yards or gardens, and all who refuse to take lodgings at the tramp barracks are arrested for vagrancy and put upon the streets, made to work out a fine, and then given a limited number of hours to get out of the county limits.—*Colusa Sun*.

GOVERNMENT SURVEYING.—There are at present four Government surveys in progress. Two under the direction of the Engineers' Department, one commanded by Lieut. Wheeler, and the other by Lieut. Clarence King; the other two under the auspices of the Department of the Interior, and commanded by Prof. Hayden, and the last by Mr. Powell.

YOUNG FOLKS' COLUMN.

Letty's Pocket.

[Written for the RURAL PRESS by LORAIN.]

Letty Mason was a bright-eyed little girl, with red cheeks, and brown hair that never would stay where it was put unless tied down with a ribbon.

"Come here, Letty," said her mamma, one day, "let me see what you have in your pocket."

Letty was so long getting ready to come, that she had to be called a second time; and mamma found it a difficult matter to put her hand into the aforesaid pocket, as it was full, clear up to the top.

"Why, what is all this?" said she, pulling out the contents one by one; and it was rather an odd collection: There was a doll's dress, two spools on a string, a piece of a shoe buckle, a piece of chalk, a soiled handkerchief, two oyster shells, some pea-pods, a string of beads, a bunch of wilted hollyhocks and a handful of pebbles.

"What a naughty girl!" said mamma, "that's a nice looking mess to have in your pocket, now, isn't it? A little girl's pocket, too! No wonder it's torn down, with such a weight—all those dirty shells and stones! Now, Letty Masou, I've told you a great many times not to fill your pockets so full of trash, and you do not mind one word that I say. I shall take your pockets all out now, every one of them, and sew up your dresses so you can't have any. Go and bring me your old blue dress that hangs in the corner of the closet."

Letty pouted a little, when mamma did not see her, and reluctantly brought the dress. She never liked that dress very much, because it had no pocket in it, and after it was put on she went away into the sitting-room and stood by the window thinking the matter over.

"Well, now," said she to herself, "it's awfully mean that I can't have any pocket in my dress—big girl as I am, and Ben has three in every one of his jackets, besides two in his pants. One, two, three, four, five," counting on her fingers. "O, my! five pockets to one boy! Mercy sakes! I wish I was a boy."

"I'm going to have one, so now, if I have to make it myself," she continued, hunting through the big work-basket to try to find something to make one of. But there was nothing there suitable and she went upstairs to the bureau in her mamma's room, pulled out one of the drawers and fumbled around till she came to a long stocking.

"That will do first-rate," said she to herself. "It won't have to be sewed up any, and mamma has such lots and lots of them, she don't need this one I am sure."

Letty shut up the drawer and hunted about for a needle and thread and scissors, and then went into a back room that was used for a store room. Here she sat down behind a big box, where no one would be likely to see her, and went to work. First she cut a round hole in the side of her dress, where a pocket is usually placed, and then proceeded to sew in the stocking. She could not sew very well and it took her a long time, and the stitches were rather long and uneven. But at last it was finished and Letty regarded it with considerable satisfaction.

"It's pretty long," said she. "I can hardly reach down in it, but then it will hold ever so much;" and going into her own little room, she commenced to fill it with some of the things she liked to carry about with her so much.

Uncle Philip came home with papa to lunch that day. Letty was very fond of Uncle Philip, and came running into the parlor to speak to him.

"What is that hanging down from your dress?" said mamma.

"Sure enough," said papa, "what is it? It looks very funny."

"Why, that's my pocket," said Letty, looking down at it, "but, dear me! it's too long."

"I should think so," said Uncle Philip, "your dressmaker must be a funny woman to make such a pocket as that. Let me see what it is."

"She didn't make it, I sewed it in myself," said Letty, turning around to run out of the room.

But her papa would not let her go. He said he wanted to take a look at that wonderful pocket, and when he saw what it was, he burst out a laughing, and they all laughed, because it did look very funny.

Letty's mamma laughed, too, although she was vexed with her little girl for cutting such a place in her dress, and she made Letty wear it, just as it was, all the rest of the day for a punishment.

Letty was careful what she put into her pockets, whenever she had any, after that, and did not try to make any more for herself out of stockings.

In looking out doors, do you notice how bright is the green of the grass and leaves? asked an elderly gentleman of a little Danbury girl, whose home he was visiting. "Yes, sir," "Why does it appear so much brighter at this time?" he next asked, looking down upon the bright, sweet face with tender interest. "Because Ma has cleaned house and you can see out better," she said.

GOOD HEALTH.

Notes on Consumption.

Dr. Geo. H. Napheys, an eminent physician, says: A particular kind of exercise is to be recommended for those whose chests are narrow, whose shoulders stoop, and who have a hereditary predisposition to consumption. If it is systematically practiced along with other means of health, we would guarantee any child—no matter how many relatives have died of this disease—against its invasion. It is voluntary inspiration. Nothing is more simple. Let her stand erect, throw her shoulders back, and the hands behind; then let her inhale pure air to the full capacity of her lungs, and retain it a few seconds by an increased effort; then it may be slowly exhaled. After one or two natural inspirations let her repeat the act, and so on for 10 or 15 minutes, twice daily. Not only is this simple procedure a safeguard against consumption, but, in the opinion of some learned physicians, it can cure it when it has already commenced.

A correspondent of an English medical journal furnishes the following recipe as a new cure for consumption: Put a dozen whole lemons in cold water and boil until soft (not too soft), roll and squeeze until the juice is all extracted, sweeten the juice enough to be palatable, and then drink. Use as many as a dozen a day. Should they cause pain or looseness of the bowels, lessen the quantity and use five or six a day until better. By the time you have used five or six dozen you will begin to gain strength and have an appetite. Of course as you get better you need not use so many. Follow these directions and we know that you will never regret it if there is any help for you. Only keep it up faithfully. We know of two cases where both of the patients were given up by the physicians, and were in the last stages of consumption, yet both were cured by using lemons, according to the directions we have stated. One lady in particular was bedridden and very low; had procured everything that money could procure, but all in vain, when, to please a friend, she was finally persuaded to use the lemons. She began to use them in February, and in April she weighed 140 pounds. She is a well woman to-day.

Dieting for Health.

Dieting for health, says *Hall's Journal*, has sent many a one to the grave, and will send many more, because it is done injudiciously or ignorantly. One man omits his dinner by a herculean effort, and thinking he has accomplished wonders, expects wonderful results, but by the time supper is ready he feels hungry as a dog, and eats like one, fast, furious and long. Next day he is worse, and "don't believe in dieting" for the remainder of his life.

Others set out to starve themselves into health, until the system is reduced so low that it has no power of resuscitation, and the man dies.

To diet wisely, does not imply a total abstinence from all food, but the taking of just enough, or of a quality adapted to the nature of the case. Loose bowels weaken very rapidly—total abstinence from all food increases the debility. In this case food should be taken, which while it tends to arrest the disease, imparts nutriment and strength to the system. In this case, rest on a bed, and eating boiled rice, after it has been parched like coffee, will cure three cases out of four of common diarrhoea in a day or two.

Others think that in order to diet effectually, it is all important to do without meat, but allow themselves the widest liberty in all else. But in many cases, in dyspeptic conditions of the system particularly, the course ought to be reversed, because meat is converted into nutriment with the expenditure of less stomach power than vegetables, while a given amount of work does three times as much good, gives three times as much nutriment and strength as vegetable food would.

BEUF TEA.—Prof. Pepper, in a lecture on typhoid fever, in the *Philadelphia Medical Times*, observes: "Indeed, as has been very thoroughly proven by Dr. Horace Hare in experiments made at the University laboratory, beef boiled in the good old-fashioned way in a bottle with water gives us a resulting solution which contains only about one-fourth of one per cent. of nourishing material. The beef tea thus manufactured is chiefly a solution of the salts of meat, and is, therefore, not nutritive, and only valuable as a stimulant to digestion. But there is another way of making beef tea which gives better results. Take a quantity of tender meat, and, after cutting off the fat, chop it up fine, put it in a bowl, pour a pint of water over it, and let it stand over night. It may possibly be well to keep the water just on a simmer; do not raise the temperature above 140°, however, or you will coagulate all the albumen, and so either leave it on the sieve in straining, or introduce it into the stomach in the form of curds. After this simmering solution has been allowed to stand over night, pour it into a pipkin and heat it again gently, with enough salt to give it flavor, and, if necessary, add a drop or two of muriatic acid. Then pour it out over a hair sieve into a jar. The resulting solution will contain all the nutriment possible, and is the most valuable kind of stimulant and laxative."

DOMESTIC ECONOMY.

Fruit Butter.

The *American Grocer* gives the following account of the manufacture of fruit butter: "In general only dried fruit is used from which to make the butter. They can and sometimes do use the green fruit, but it is not so practicable in the cities. The principal kinds made are from apples, peaches, and quinces. Recently they have commenced making pear-butter also. It is not easy to get dried quinces in the market, consequently during the season when they are ripe the green fruit is used and its manufacture pushed, and a large quantity also put up in hermetically sealed cans for use later in the year. We saw several hundred cans that would hold two or three hundred pounds each awaiting the incoming fruit. Apple and peach butter, however, are the kinds mostly made. Almost any reasonable amount of these kinds of goods can be found at all seasons, and consequently the manufacture can continue all the year round. As a matter of fact, however, there is generally very little to do in July and August, the dull months. We were told that the southern dried fruits were better suited for the purpose than that of the north and west. The dried fruit is first carefully washed and sorted, and picked over and soaked, so as to get everything out that ought not to be in. It is then put into large copper kettles holding about 1,500 pounds, which are surrounded by steam jackets, and in which is a stirrer run by machinery. Then a sufficient quantity of sugar is put in, and enough water to answer the purpose, and the batch is cooked and constantly stirred until it is done, which takes about four hours. One kettle can thus make about four batches running full time, and the three large kettles used by this firm can turn out, when fully at work, at least 18,000 pounds of fruit butter a day—about nine tons. After it is sufficiently cooked, which the experienced manufacturer can very accurately judge, it is forced through a peculiarly constructed sieve, which revolves upon a row of pestles, by which process any cores or lumps are prevented from going into it. It is then passed down into another department, where it is put into pails ready for shipment. The pails are of different sizes, holding respectively 5 pounds, 6 pounds, and 35 pounds. The goods will keep excellently well under all favorable circumstances, and will bear shipment to all parts of the country. It might not be best to have it on hand in a southern latitude in the middle of the summer. We do not know an article that promises to be more popular and useful than this. It mingles the *utile cum dulce* to perfection, and no well-regulated grocer's establishment should be without it. It is cheap enough to sell readily and give a good margin for profit. It is only nine years ago that this article was first introduced into the market of Philadelphia, and only two years since its manufacture was begun here. The wholesale trade generally handles these goods. Fruit butter may be made in the country very easily and cheaply. The same purpose that sugar subserves in manufactories here may be accomplished there by the use of cider. When apples are ripe make say three barrels of cider. Then pare and core four bushels of apples. Then boil down the three barrels of cider to one and a half, and set it convenient to the copper kettle, in which place the four bushels of apples. Pour on the apples from the cider enough to answer the purpose and fire up. As the cider boils away add more and more until it is all used up and the contents of the kettle are brought down to a proper consistency, of which one must be judge. A little practice will make one perfect in this process. This is for apples. It will apply equally well to any other kind of fruit from which it is practicable to obtain the juice as one would from apples."

FAVORITE MEAT-PIE.—Take cold roast beef, or roast meat of any kind, slice it thin, cut it rather small, and lay it, wet with gravy and sufficiently peppered and salted, in a meat-pie dish. If liked a small onion may be chopped fine, and sprinkled over it. Over the meat pour a cupful of stewed tomatoes, a little more pepper, and a thick layer of mashed potatoes. Bake slowly in a moderate oven, till the top is a light brown. This makes a very good dish, and is a very great favorite with parties who do not usually like meat pies.

RICE SOUP WITH CURRY.—Melt in a sauce-pau two ounces of butter with a tablespoonful of finely chopped onions; fry until slightly browned; add two tablespoonfuls of curry powder, mingle well, dilute with two quarts of stock broth, and boil 10 minutes; prepare a pint of hot boiled rice in a soup-tureen, pour the soup over the rice and serve.

MACAROONS.—Blanch four ounces of almonds and pound with four spoonfuls of blange flower water; whisk the whites of four eggs to a froth; then mix it and one pound of sugar, sifted with the almonds to a paste, and, laying a sheet of wafer paper on a tin, put it on in different little cakes the shape of macaroons.

YORKSHIRE MUFFINS.—Take one tablespoonful of butter and two quarts of flour, add salt to your liking; make the dough stiff enough for a spoon to stand in; stir in one teacupful of yeast; let it rise over night, and in the morning bake in muffin rings and serve for breakfast while hot.



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SAN FRANCISCO:

Saturday, July 20, 1878.

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NEW ADVERTISEMENTS.

Wanted.—An Experienced Broom-Maker, Thos. McCowen, Pomona Valley, Cal.; Thirteenth Industrial Exhibition Mechanics' Institute, San Francisco, Cal., 1878, J. H. Culver, Secretary.

The Week.

As we rode up through Alameda county this Wednesday morning, we witnessed rather unexpected yet not unprecedented scenes. Heavy clouds rolled aloft while around the horizon sunlight was playing. The gentle rain was marking its light diagonals through the air, ruled by a slight breeze from the northwest. As we rode along, knots of men were standing in the shelter of the buildings; evidently discussing the danger of losing a day from the harvest machinery which stood waiting in the fields. The dust was still; the air was filled with liquid perfumes like those which attend Eastern summer showers. As we rode farther northward toward the city the shower area was passed and all was again bright and arid, and the threshers were in full motion. The storm had vanished like a dream.

This week's Press will be found to contain many things of interest. We announce the successful working of machines which enable the grain grower of the San Joaquin to place his standing grain upon the Oakland wharf in 24 hours. This seems almost sensational, but such is the result secured by labor-saving machinery. This account of mechanical triumph stands beside the record of California agriculture in 1835. Who that reads and marks the progress made in a generation can tell whether we are going and what will be the facts a generation hence? Hand labor is rapidly being eliminated from agriculture as well as from manufactures. What will be the result? It is a conclusion not to be jumped at, and we leave it for fuller thought. Certain it is, however, that the world does not go backward. Those who are left behind are forgotten. He will succeed who sets his sails so that the breeze of progress will fill them and speed his bark.

Examinations for Phylloxera.

We lately made microscopic examinations of vine roots in a case of suspected phylloxera, and found the eggs and newly hatched larvae of the insect in abundance. Though we regretted the discovery, it was no less a fact. It is time every man whose vines show signs of disease and enfeebled growth knew whether this ruinous pest was in his vineyard or not. Many have not the skill nor the appliances to make close microscopic examinations for themselves, but they should not be denied full knowledge. For obvious reasons a man who may have the scourge just appearing in his vineyard and proposes to fight it, does not care to have his ill fortune proclaimed through the newspapers. Therefore we make this proposition to subscribers of the RURAL PRESS: If any one of you find marks of disease in your vines, and desire to know whether the phylloxera is present or not, send samples of the leaves and pieces of the thick roots and fine roots or tendrils, addressed to the "editor of the RURAL PRESS, care Dewey & Co., No. 202 Sansome St., S. F." The root samples need not be large, and if roots and leaves be securely tied (not pasted) in strong paper they can be sent by mail at one cent per ounce postage. Put your initials on the package and at the same time send your name and postoffice address in the letter, enclosing stamp for reply. For all subscribers to the PRESS, who comply with these instructions we will make microscopic examination of the specimens sent, and communicate the results by private letter, free of charge. We will do this for all sending samples unless we should find the examinations were more numerous than we have leisure hours to spend upon them. The editor as a rule does not have time to attend to matters not intended for publication, but in this matter we are willing to "make time" in some way because of the importance of it. We are led to make this proposition to friends of the RURAL, because we believe that some of them are dwelling in darkness on the phylloxera question, through fear of the shade which the publication of finding phylloxera in their vines would cast upon their property. While this is going on the insect is multiplying. Therefore, we offer to tell our readers the facts, as the divorce lawyers say, "without publicity," hoping thus to win them to vigorous efforts to stamp out the growing evil. This offer of free work for individual interests must be restricted to those who are subscribers to the RURAL PRESS, and to such it stands open until notice is given of its withdrawal.

Cheese for the Army and the People.

We alluded last week to the effort of Governor Seymour, of New York, to gain information through our foreign representatives concerning the chance for increasing our exports of dairy products. Another movement which upon the attention of the government is the advisability of introducing cheese as a part of the regular army rations. This proposition is of interest on this coast in several ways. First it will naturally increase the consumption of cheese directly, and therefore favor our cheese producers, because it is becoming more and more the practice of the government to buy food supplies for western soldiers in western markets instead of freighting provisions from eastern producing regions. This is as it should be, for the taxes which we pay for supporting the army should be returned to us as far as possible for supplies which we can produce, and not taken wholly from us to the benefit of distant producers. It has been shown that the United States can be furnished with salted beef as well here as to buy it in Chicago and ship it to this port, and the result is that contracts for army and native supplies are awarded to our provision packers. This movement could well be carried farther, and embrace our dried fruits and vegetables instead of eastern fruits, etc., which we believe are now used for this purpose. So too, if cheese be introduced as an army ration we shall demand that there be no invidious distinction made in favor of cheese from any particular State, but that all dairy regions shall have free opportunity to profit by the new demand. Commenting upon the proposition of Governor Seymour, the *American Cultivator* estimates that the army of the United States would require of cheese as a ration, about 50,000 pounds per week, or at the rate of 2,540,000 pounds annually. This would not be much cheese when one takes the amount into comparison with the aggregate production of

the United States. It might be a question too whether even this amount would be called for if the Indians and Congress continue their reductions of the army. However this may be, the new ration would dispose of a certain amount of cheese directly and indirectly would influence consumption as we remark below.

Putting good cheese upon the list of army supplies would call the attention of the people of this country to the fact that cheese is not fitted merely for a side dish as a luxury, but for men who require a food which will give and sustain strength during severe physical exertion, there is nothing better than well made and well cured cheese. There is no reason why cheese should not be a part of the diet of the laboring man in this country as abroad. It is true that meat is cheaper here than it is in more thickly settled countries, and this is a fortunate thing in many ways, but there are cases in which it would be highly advantageous to count upon cheese more as a staple instead of a fancy article of diet. It is concentrated and consequently easily transported. It is tenacious of its good qualities, if well made, and consequently is fitted to be trusted where trust in more perishable articles would be disastrous. It has been claimed that one pound of cheese contains as much nutritious matter as three pounds of good meat, and men who are undergoing active physical labor generally have full power to digest and assimilate its nutriment. If this fact were more generally known and acted upon it would appear that cheese is in truth a low priced food as compared with other supplies purchased by the laborer.

Much of the future of dairying in this country, as we remarked last week, depends upon increasing the consumptive demand. Even if the consumption should be increased at the expense of a reduction of the consumption of meat it would be a gain to the farmer in the end, for as his lands increase in value through the settling up of the country, he can maintain fertility and gain a better interest upon his investment by dairying than by meat production. We hope that cheese will be made an army food and a food for the people generally until its consumption is increased many fold.

In his presentation of this subject, Mr. Seymour makes a point concerning the retail selling of cheese which is of universal application and should be widely published. He says: "When I wrote letters to the heads of the army and of the State department, I had not merely in my mind the interests of the farmer, but the wants of our laborers. They would save not only in cost, but, as it is a prepared food, and there is no loss in its use from fragments, they would save many times the inconvenience of making fires and cooking meats. If those who have charge of our charities in large cities would look into this, they will find that they can save much and help and benefit the poor by giving them this article, which will not subject them to the troubles and wastes of cooking. I am firm in the belief that it will be a great blessing to all classes, to the army, to laborers, to the poor and rich alike, if we revive the use of an article which we find in all other countries is looked upon as one of the main reliances of the human race for strength and health. The difficulty in the way of this is the fact that the small amount used by each family increases its cost. If you go to the shops of those who deal in provisions in this city, in the heart of the cheese-making country, you will find that they charge a larger profit upon it than upon other things. If you object to this and say, why do you charge as much profit on two dollars' worth of cheese as you do on eight dollars' worth of flour? the fair answer is that there is a large and steady call for flour, but a small and uncertain one for cheese. This proves that the more you can get into use, the cheaper it will be. This brings us to the point, what must dairymen do to make a full demand? I answer, make the low prices at which you now sell serve you, and turn them to account. By a wise course you can make them lay the foundations of future prosperity. You can make them in the end help you, and help the merchants, and help their customers. Now is the time to show the world how cheap it is in your hands, what are its merits and why it should be used. If you do this, the merchant finding a large call for it will sell at a less profit. That's a universal law in trade. The customer will pay less and you can get more. I hope much from the report to be made by the army officers. But you must do much for yourselves. You must make displays, and teach the public the great value of your industries, and teach officials its importance to the prosperity of our country and the finances of our government, by exhibitions of your products which will attract public attention."

RETURNED.—We announce to interested friends that Messrs. Dewey and Ewer, publishers and proprietors of the PRESS, have returned from their Yosemite excursion, and are at their posts of duty again. They are refreshed by the respite from business and by the outdoor life which they have led. They desire us to return thanks to all the friends who showed them kindness during their sojourn in the country. As the trip was one for recreation, we do not expect our travelers will do much, at present, in the way of descriptive articles, but the information which they secured during the journey will doubtless work to the advantage of the PRESS in many ways.

The Centennial Harvester.

Last year we gave the news about a combined machine brought out in the San Joaquin valley, which claimed to take the grain from the stem and deliver it to you in sacks, thus doing its own heading, threshing and sacking as it moved over the ground. The inventor was Mr. Rice, of Modesto. Last year's work in the field, though encouraging, was not perfect, and the machine was remanded to its inventor and builders to remedy mistakes, and let the public see what they could do after another harvest's trial. A number of the machines were built during the winter by Messrs. Holt and Rice, of Stockton, and spoken for by several leading San Joaquin farmers. We made arrangements some time since that one of our most cautious and trustworthy readers in the valley, Hon. C. J. Cressey, should watch the machine for us during the this season's harvest and advise us of its success or failure. Mr. Cressey ordered one of the machines that he might test its working to his own satisfaction, and he now favors us with assurance that it is a success.

The Centennial harvester is a combination of the ordinary header and separator. It is operated by four men and 16 horses, and is moved at the rate of from two and one-half to three miles per hour. Its sickle bar is 16½ feet long, and at the speed mentioned cuts and threshes two acres of grain for each mile the machine travels. Its average cutting is from 35 to 40 acres per day. It cuts the grain the same as an ordinary header, and instead of being put into a header wagon and hauled to a stack, it is, before touching the ground, carried on an apron to the separator, where it is threshed, run into sacks, which are sewed and dropped on the ground as the harvester moves round the field. Thus, with but one handling, the grain is headed, threshed, sacked and ready to haul out of the field to the warehouse or depot.

Mr. Cressey says he sets the harvester at work in his grain field in the morning, and at night he has from 35 to 40 acres cut, threshed and put into cars, and at five o'clock the next morning the cars are at Oakland wharf, with the wheat ready to be placed on shipboard. Charmed with this quick work Mr. Cressey recalls the fact that from six to ten years ago (and before building of the railroad), after spending weeks in cutting, stacking and threshing his grain, he had to haul it, with teams, 60 miles to Stockton for market, consuming five and six days each trip, and at an expense at which the freight by rail diminishes into insignificance. Now he can cut his grain one day and have it in market the next, and he can draw against it at once to pay his men and other expenses. This is quick work on a large scale, which we believe the world has never known before.

The cost of these machines is \$2,000. This appears to be a large amount to pay for a single implement to use on a farm, but Mr. Cressey reminds us that every farmer who seeds 160 or more acres of ground, needs at least four horses for this work. Thus by using the power they already have, six farmers, adjoining each other, could unite in purchasing a harvester. Four of the six could, with their 16 horses, operate the machine, and the other two with a team, could haul the sacks of grain from the field. Thus by helping each other they can cut, thresh, and haul from the field the wheat or barley from 35 to 40 acres each day, and thus turn their own resources to fullest account.

The account given us by Mr. Cressey is supplemented by the results of a study made of the harvester in the field by the editor of the *San Joaquin Valley Argus*. The editor says: "We visited one of the large harvest fields of Mr. C. H. Huffman; and after following the harvester around for half an hour, we were fully satisfied that it was all that the builders and inventors claimed it to be; and also, that Mr. Huffman was master of the situation. The result of the test is, that with 16 good mules, four men, plenty of oil, and Mr. Huffman as captain, pilot and engineer, 40 acres of wheat can be cut, threshed, cleaned and sacked in one hour. Mr. Huffman pronounces it a perfect success, and says that it does not lose one kernel more than the old header, and that \$10 will pay for all the improvement necessary for its perfection. He is terribly in earnest, and so much pleased with the harvester that he has already purchased two of them. We are assured that Mr. Huffman will save this year at least \$9,000 in the harvesting of his crop, by reason of the use of the harvester instead of the common header and thrasher."

This testimony is unequivocally in favor of the machine. Such being the case, we see no reason why the California inventors should not receive the \$25,000 reward which the Australian government offers for such a machine.

It is fair to announce that the idea of cutting, threshing and sacking grain at the same time, is also being worked out by another inventor who will have his apparatus in the field in time for test this year. The method is somewhat different from the combined machine described above, and it will doubtless soon be made public.

ON FILE.—"Blackberries," G. R.; "Apricots," J. S.; "Have," or "Be," E. B.; "Cheat," A. B.; "Household Economy," etc., N.; "Irrigating Canals of Tulare Co.," etc., J. W. A. W.; "The Great Western," W. H. S.

California Agriculture in 1835.

EDITORS PRESS:—At a time when California has taken a foremost place among the wheat-producing sections of the world, when permanent agriculture furnishes the chief income of our State, it may be interesting to those concerned in husbandry to see what was written about California 43 years ago, when the sections that are now broad cultivated fields were unfenced plains, over which the herds of wild cattle roved at will. The extracts are from "Forbes's California," an exceedingly rare book, published in London in 1839 and written by Alexander Forbes in 1835. —CHARLES B. TURRILL, San Francisco.

Forbes's Description.

The lands of California are almost exclusively in the hands of the missionaries, and consequently its agricultural operations are chiefly carried on by them. This art or science is well known not to be even now in a very advanced state in Spain, and could not possibly have been well understood, even in its then state, by the monks who first settled in California in the last century. The actual state of agriculture in this country, which has not in any degree improved since its first introduction, may consequently easily be imagined to be most rude and backward. It is not thought necessary by those primitive farmers to study the use of fallows or green crops, to adopt the six or seven *coarse shift*, or any other shift whatever; nor to study the alternation of white and leguminous grains, or any such modes of improved husbandry; these are refinements they never heard of or dreamed of. Their only plan of renovating the fertility of an exhausted soil is to let it rest from culture, and to abandon it to its native weeds until it may again be thought capable of bearing crops of grain. From the superabundance of land in the country, a second cultivation of exhausted ground is not resorted to for many years and perhaps not at all.

The grains chiefly cultivated are maize or Indian corn, wheat, barley, and a kind of small bean called *frijol*; this bean is in universal use all over Spanish America, and is a most pleasant food. They are cooked when in a ripe state, fried, with lard, and much esteemed by all ranks of people.

Maize is the staple bread corn and is cultivated in rows or drills. The cultivation of this grain is better managed than that of the others, and is certainly superior to what might be expected from such rude farmers and with such implements of husbandry as they possess.

The California Plow.

The plow used, not only in California, but in all other parts of America inhabited by the Spanish race, is of great antiquity—and is also, I believe, still used in old Spain. It is composed of two principal pieces, the one which we shall call the main piece is formed out of a crooked branch of timber cut from the tree, of such a natural shape as to form the main piece, which constitutes of itself the sole and handle or stilt; it has only one handle and no mold board or other contrivance for turning over the furrow, and is therefore only capable of making a simple rut equal on both sides; a share is fitted to the point of the sole, but without any feather, and is the only iron in the whole construction of the plow. [A front view of this piece of iron is given in the little figure just in front of the plow.—EDS. PRESS.] The other piece is the beam, which is of great length, so as to reach the yoke of the oxen by which the plow is drawn; this beam is also formed of a natural piece of wood, cut from a tree of the necessary dimensions, and has no dressing except the taking off of the bark; it is inserted into the upper part of the main piece, and connected with it by a small upright piece of wood on which it slides, and is fixed by two wedges; by withdrawing those wedges the beam is elevated or lowered, and by this means the plow is regulated as to depth of furrow, or what plowmen call, giving more or less earth.

The long beam passes between the two oxen like the pole of a carriage or ox-wain, and no chain is required for drawing the plow; a pin is put through the point of the beam which passes before the yoke, and is fixed there by thongs of rawhide. The plowman goes at one side of the plow, holding the handle or stilt with his right hand, and managing the goad with his left. There are never more than two oxen used in these plows, and no driver is required; the plowman managing the plow and directing the oxen himself. The manner of yoking the oxen is not as is done in the north of Europe, by putting the yoke on the shoulders and fixing it by a wooden collar or bow, round the neck: the yoke is placed on the top of the head close behind the horns, tied firmly to their roots and to the forehead by thongs, so that instead of drawing by the shoulders they draw by the roots of the horns and forehead. When oxen are so bound up they have no freedom to move their heads; they go with their noses turned up, and seem to be under great pain.

The Spanish Carts.

Their carts are drawn by oxen yoked in the same manner; and in this case, they have to bear the weight of the load on the top of their heads, which is certainly the most disadvantageous mechanical point of the whole body: this renders their suffering more complete than in the plow, and it is truly distressing to see poor animals writhing under a load, which, on their backs or shoulders, they could easily support.

The form of the ox-cart is as rude as that of the plow; it is composed of a bottom frame of a most clumsy construction, on which is raised a body of a few bars stuck upright, of a great height, and connected at the top with other slight bars; this cart is usually without lining,

GRAIN PRODUCTS OF CALIFORNIA IN 1831.

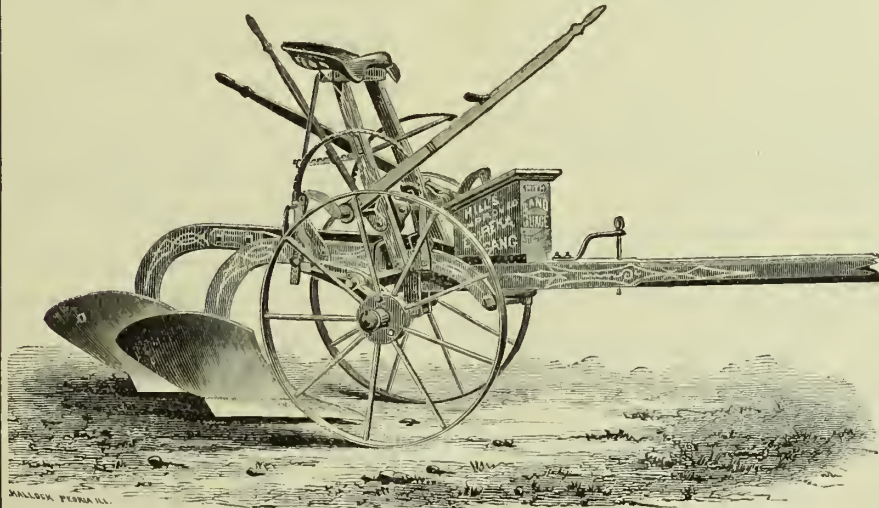
Names of Jurisdictions, Missions and Towns.	Wheat.	Maize or Indian Corn.	Frijol or Small Beans.	Barley.	Beans, Garbanzos, Peas.	Total Fanegas.
JURISDICTION OF SAN FRANCISCO.						
PRESIDIO OF SAN FRANCISCO.....	233	70	40	.....	.....	343
Town of San Jose de Guadalupe.....	1,657	1,560	191	.....	.....	3,408
Mission of San Francisco Solano.....	1,171	200	24	241	24	1,660
Do of San Rafael.....	774	130	15	388	20	1,327
Do of San Francisco.....	670	15	9	340	58	1,092
Do of Santa Clara.....	2,400	60	25	.....	200	2,685
Do of San Jose.....	4,000	1,000	123	1,100	418	6,641
Do of Santa Cruz.....	160	300	10	386	20	876
JURISDICTION OF MONTEREY.						
PRESIDIO OF MONTEREY.....	490	332	131	.....	.....	953
Village of Branciforte.....	103	160	80	.....	.....	343
Mission of San Juan Bautista.....	840	170	40	255	6	1,311
Do of San Carlos.....	200	.....	.....	215	62	477
Do of Na. Sa. de la Soledad.....	538	50	.....	243	62	803
Do of San Antonio.....	955	115	40	568	25	1,701
Do of San Miguel.....	599	36	9	57	33	734
Do of San Luis Obispo.....	350	60	20	.....	.....	450
JURISDICTION OF SANTA BARBARA.						
PRESIDIO OF SANTA BARBARA.....	.....	300	90	.....	.....	390
Mission of La Purissima.....	700	100	20	56	17	893
Do of Santa Ines.....	800	400	20	.....	.....	1,220
Do of Santa Barbara.....	730	90	50	336	30	1,236
Do of Buenaventura.....	700	200	160	800	.....	1,860
Do of San Fernando.....	200	250	40	.....	65	555
Town of La Reyna de los Angeles.....	138	1,753	170	.....	.....	2,075
JURISDICTION OF SAN DIEGO.						
PRESIDIO OF SAN DIEGO.....	140	125	5	.....	.....	270
Mission of San Gabriel.....	1,400	400	13	.....	25	1,838
Do of San Juan Capistrano.....	450	625	30	.....	5	1,110
Do of San Luis Rey.....	1,800	2,000	200	1,200	15	5,215
Do of San Diego.....	2,946	420	80	1,200	.....	4,646
Total Fanegas.....	25,144	10,926	1,644	7,405	1,083	43,202

but when used for carrying maize, it is lined with cane tied to the upright bars. The pole is of very large dimensions, and long enough to be fastened to the yoke in the same manner—as the beam of the plow. This also adds greatly to the distress of the poor oxen, because, the pole being tied fast to the yoke which rests on their heads, they feel every jerk and twist of the cart in the most sensible manner; and when the road is full of stones, sloughs, and all manner of obstructions, as it generally is in America, it appears as if the animal's head would every moment be twisted off!

The wheels of the California ox-cart, as well

as those of the other Spanish Americas, are of a most singular construction. They have no spokes, and are composed of only three pieces of timber. The middle piece is hewn out of a huge tree, of a sufficient size to form the nave and middle of the wheel all in one: this middle piece is made of a length equal to the diameter of the wheel, and rounded at the two ends to arcs of the circumference. The two other pieces are made of timber naturally bent and joined to the sides of the middle piece by keys.

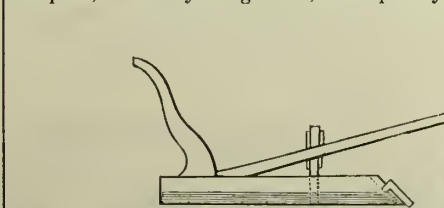
Manner of Plowing and Seeding. From the construction of the plow as already described, it will be perceived, that there being no mold-board or feathered shear, the furrow cannot be cut up and turned over as with an English plow, a rut only being made; consequently



A CALIFORNIA PLOW IN 1878.

drawn over the field, something on the plan of a roller, but dragging without turning round, so as to carry a portion of the soil over the seed. In the cultivation of maize, when the field is sufficiently plowed or crossed, a rut or furrow is made by the plow at the distance intended for the drills, which is generally five or six feet. In this rut the seed is deposited by hand, the laborers carrying it in small baskets, out of which they take a handful and drop from three to five grains at once, which they slightly cover with their foot from the loose earth on the side of the rut; and so proceed, depositing a like number of seeds at the distance of about three feet. In this state the seed is left to spring up to a moderate height, and then the plows are again put to turn a furrow on each side of the rut

toward the young plants, thus forming a drill. When the maize grows up to a considerable height, it is commonly cleaned by hand, by pulling up the weeds; the middle between the drills is again turned up by the plow passing up and down, and the labor is then finished.



A CALIFORNIA PLOW IN 1835.

The soil can only be broken by successively crossing and recrossing the field many times; and it is evident that however often crossed by a machine of this kind, the root weeds of any tenacity can never be cut, so that this mode of plowing must always be very imperfect; and although four or five crossings are often given, yet the soil is not sufficiently broken or the weeds eradicated.

The necessity of giving so many crossings is a great waste of labor; and as the plowing is deferred until the commencement of the rains, and very near the time of sowing, an immense number of plows must be employed; it is no uncommon thing to see on the large maize estates in some parts of Mexico, upwards of a hundred

heads of maize; when full he carries it on his back to the end of the field where an ox-cart is stationed, and into which he empties his basket; when the cart is full it proceeds to the place of deposit. In this way the stalks are all left; and when all their heads are gathered the cattle are then turned into the field to eat up the leaves and such part of the stalks as are eatable; these are found to be very nutritious; and the cattle get fat at this season more than on the best grass pastures.

The next operation is to separate the maize from the head or husk. This is done by rubbing the full head against a very empty husks bound together, and is a very tedious operation.

Wheat is sown "in broadcast" on land prepared as for maize. In the south of California, owing to the length of the dry season, it is cultivated by irrigation; but in the north, and particularly round the bay of San Francisco, * * * the rains and dews are sufficient and irrigation is unnecessary. * * * At present, from the unskillfulness of the culture and the inattention to procure good seed, neither the quantity nor quality is equal to what they ought to be. The cultivation of wheat is at present but very limited, although from the excellence of the soil and climate, and the abundance of land fit for the production of this grain, upper California ought to be, and one day must be, the granary of all South America.

Barley is cultivated but in small quantities, no use being made of it except to feed horses. They make no malt liquor or spirits from this grain. Oats are not known in any part of Spanish America. All kinds of grain in California are threshed out at once, without stacking or bousing any part of it with straw.

California Crops of 1831.

The table on this page gives the whole produce in grain of Upper California, in the year 1831, calculated according to the localities, and in Fanegas.

Taking the Fanega at two and one-half English bushels, the harvest of 1831 will be as follows:

		Quarters.
Wheat.....	7,857½	
Maize.....	3,414½	
Frijol.....	514	
Barley.....	2,314	
Beans, garbanzos and peas.....	338	

Total quarters.....14,438

Now, reckoning the following as the average price of grain in California at the present time, viz., wheat and barley two dollars the fanega, or £1 5s. the English quarter, and maize at one and one-half dollars, or £1 per quarter, the following will be the value of the produce in English money.

	£.	s.	d.
Wheat.....	9,822	17	6
Maize.....	4,268	00	0
Barley.....	2,314	00	0
Peas and beans, reckoned as barley.....	825	00	0

Total.....17,250 17 6

[Thus it appears from this early writer upon California agriculture that the value of the agricultural productions of the State for 1831 was about \$86,285. Thirty-five years later, in 1876, the value of the wheat crop alone was \$40,339,559. What an increase in a single generation?—EDS. PRESS.]

The California Plow of To-day.

For the purpose of showing contrast by illustration as well as in words, we give in connection with the engraving of the California plow of 1831, one of a California plow of 1878. We choose this one of the several powerful and beautiful gang plows now in use in this State, because it is a California invention and Californian in manufacture. It is the latest pattern of gang plows made by the Sweepstake Plow Company of San Leandro. We doubt if our progress in agriculture during the last 47 years could be better shown at a glance than by the two plows shown upon this page. In the one case there is the old crooked stick which has come down from days of pagan darkness, and held its place in the soil until within the memory of a man half-grown. Right upon the track of this rude instrument comes the perfected machine, by which the plowman as he rides along can regulate his depth and width of cut, at the same time overturning the soil completely in two or three furrows, if he chooses to add another plow to his frame. Thus has our agricultural achievement of to-day come into existence almost in a point of time; as Minerva sprang full-formed from the brain of Jove.

It is hardly necessary to speak at length of the excellences of the modern plow shown in the engraving, for they are generally known to our readers. And yet we cannot refrain from noting how the rude wedges in the old plow pole of 1831, by which a deep or shallow cut was secured, have grown into the handy levers by which not only depth of cut but width of furrow may be accurately altered by simple motions of the hand. How the little piece of iron which was a "point" indeed, and nothing more, has changed into an adjustable "slip-share." How, by its double levers the plows can be made to work at different depths, so that the hillside is conquered and becomes as the plain. How by flexible or self-adjusting pole the plow is made to cut even depths on uneven surfaces, and the "hog-wallow" country no longer vexes the plowman. All these points of working in contrast with the rude and inefficient performance of the plow of 1831 show not only the advancement of our agricultural arts, but how the mechanic in his shop has kept his art abreast of the needs of a progressive agriculture.

Harvesting.

The process of harvesting maize is as follows: The laborer carries with him a large and very deep basket of wicker work, with which he proceeds along the drills and fills it with the

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EXAMINATION OF CANDIDATES FOR ADMISSION,

July Twenty-Second and Twenty-Third.

By request, instructions have been provided during the summer months for students preparing for the August examinations at the University. For catalogues or particulars, address

JOHN F. BURRIS,
Berkeley, Cal.

NOTE.—We desire to call special attention to the organization of our Grammar Department, separate from the Academical, and solicit the patronage of parents and guardians of small boys

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Choice imported Italian Queens, from best districts in Italy, \$7 each. Tested Italian Queen Bees, from selected mothers, \$3. BEE KEEPERS TEXT BOOK, just issued after being thoroughly rewritten and enlarged, now forms the only standard work on apiculture, price, paper cover, 60 cents; muslin, \$1.25; old edition, 40 cents. Quinby, \$1.50; "Langstroth on the Honey Bee," \$2. Other works on apiculture and agriculture for sale at publishers' prices. Bee-Keepers' Magazine, \$1.50 per annum. King's New Bellows Smoker, for subduing bees, by mail, \$1.25. Hives and other bee-keepers' supplies for sale. For particulars, address

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DIVIDEND NOTICE.

The German Savings and Loan Society.—For the half year ending June 30, 1878, the Board of Directors of the German Savings and Loan Society has declared a dividend on Term Deposits at the rate of eight (8) per cent per annum, and on ordinary deposits at the rate of six and two-thirds (6 2/3) per cent per annum, free from Federal Taxes, and payable on and after the 15th day of July, 1878. By order.

GEO. LETTE, Secretary.

DIVIDEND NOTICE.

San Francisco Savings Union, 532 California street, corner Webb.—For the half year ending with June 30, 1878, a dividend has been declared at the rate of eight (8) per cent per annum on term deposits and six and two-thirds (6 2/3) per cent per annum on ordinary deposits, free of Federal Tax, payable on and after Tuesday, July 16, 1878.

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SHEEP WASH,
\$2 Per Gallon.

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HAND PRINTING PRESS WANTED.—Parties having a second hand Washington or other hand printing press which they wish to dispose of, will please address this office stating price, size and condition.

Grangers' Bank of California,

42 California Street,

SAN FRANCISCO CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

ALBERT MONTPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

THOMAS FLINT, President. J. W. FOARD, Manager.
FERD. K. RULE, Secretary.

OFFICE OF

The California Farmers' Mutual
FIRE INSURANCE ASSOCIATION.

209 Sansome Street, San Francisco, Cal.

At a meeting of the Board of Directors of the California Farmers' Mutual Fire Insurance Association, held on the 10th day of April, 1878, a resolution was adopted appointing J. W. Foard, Esq., late Insurance Commissioner of the State, General Manager of the business of the Company.

FERD. K. RULE, Sec'y. THOMAS FLINT, President.

OFFICE OF INSURANCE COMMISSIONER,
San Francisco, May 24th, 1878.

I, JOHN C. MAYNARD, hereby certify that I am Insurance Commissioner of the State of California, and have supervision of Insurance business in the State, and as such Commissioner further certify that the California Farmers' Mutual Fire Insurance Association of San Francisco is a corporation properly organized under the laws of this State, and possessed of a paid-up capital of two hundred thousand dollars (\$200,000), equal to gold coin of the United States, is authorized to do business in the State. And I further certify that upon an examination of the books and papers of the said Company, it is shown to be possessed of good, valid assets, amounting to the sum of three hundred and twenty-six thousand six hundred and seventeen dollars and twenty cents (\$326,617.20); and has outstanding liabilities, as defined by the laws of the State, amounting to one hundred and twenty thousand three hundred and two dollars and thirty-seven cents (\$120,302.37), exclusive of capital stock.

As witness my hand and official seal, the day and year first above written.
[Seal.] [Signed.] J. C. MAYNARD,
Insurance Commissioner.

Presenting the above Certificate of the Insurance Commissioner, the Company would call the attention of the public to the fact that in this, the fourth year of its existence, and after prompt payment of all its losses, amounting in the aggregate to \$110,643, it shows a clear surplus for the benefit of policy holders of \$206,314.83 over and above \$115,721.32, set apart as required by the law, as a re-insurance reserve.

Within the past half year radical changes having been made in the management of the Company's affairs, a continuance of the public patronage hitherto accorded it, is solicited at 209 Sansome Street.

THOMAS FLINT, President. J. W. FOARD, Manager.
FERD. K. RULE, Secretary.

LAND! BOUNTY!! PENSIONS!!!
PATENTS!

Do you want to buy, sell or exchange lands or other property in any part of the U. S. or Canada? Are you a Soldier or Sailor. In want of a Patent? Why not obtain more Bounty or Pension? Do you want to locate Government or State Lands without settlement? Why not? When I have the well-known Approved Soldiers' Additional Homesteads, under seal of the General Land Office, and that can be located without settlement, upon any Government \$1.25 or \$2.50 lands, subject to homestead. The Sioux Half-Breed Scrip, for location upon unsurveyed lands.

Land Warrants and Scrip of all Kinds For cash, or part on time. Good title given or no pay. Have you any lands with an imperfect title to sell, or choice vacant lands you know of which could be located to advantage; or claims not lawfully held, which we could contest. Let me hear from you in full, and I will do my best to inform you what is to your advantage.

I will mail you a circular explaining all, and a copy of the new Pension Law. Address, (plainly)

D. H. TALBOT,

General Land, Scrip and Warrant Broker, SIOUX CITY, IA.

W. & J. ROBINSON,

Hanford, Tulare County, - - California.

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THOROUGHBERED BERKSHIRE SWINE,
And Pure Brown Leghorn Fowls.

Scotch Colley (Shepherd) Pups for sale. Imported parentage on both sides.



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WATER WHEEL**
WARRANTED BEST & CHEAPEST.
Also, MILLING MACHINERY.
PRICES REDUCED APR. 20, '78.
Pamphlets free. OFFICE, YORK, PA.

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ROOMS are exceedingly popular. The best
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Dinner furnished at the low
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**NO. 218 SANSOME ST., S. F. FIFTY
CENTS,** from five to eight p. m. Visitors to S. F. should
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A thorough training school for the best colleges. Also, offers a solid, practical, business course, including book-keeping. Location unsurpassed; methods most approved; health preserved and physical development secured by daily gymnastic and brief military drill. Preparatory department for lads in successful operation. Attention invited to methods and terms. Address for particulars,

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Oakland, Cal.

N. B.—The next school year will commence July 30th.

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President Business College, San Francisco, Cal.

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Washington, Alameda County, California.

The Thirtieth semi-annual term of this Institution will commence on

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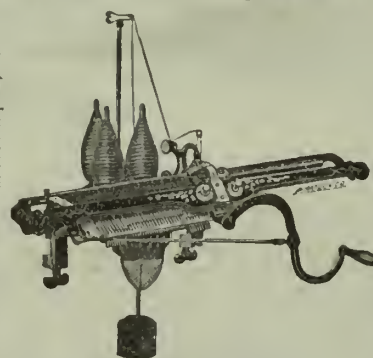
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IT IS THE ONLY MACHINE

That knits flat or tubular work of all sizes;
Narrows and widens on hosiery or tubular work;
Knits a regular right-angled heel, as by hand;
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Knits the Afghan stitch, Cardigan Jacket stitch, Fancy Ribbed stitch; the Raised Plaid stitch, the Nubia stitch, Shell stitch, Unique stitch, Tidy stitch, etc.
It is now the standard machine for manufacturing, and the only family knitter that fills the bill. Local agents wanted. Send for circulars to

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Manufacturers of knitted goods and dealer in woolen yarns.
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ALAMEDA COUNTY.

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Land for Sale in Napa County.

I am offering my lands in Foss Valley, ten miles north of Napa City, for sale, as follows—to wit:

One tract of 800 acres, including my homestead, 220 acres of which is choice valley land, the balance good grazing land, is well watered, has a large supply of wood, is well improved, has a comfortable dwelling of nine rooms, barn, granary, sheds, etc. Also, a good orchard and choice vegetable garden. Price, \$15.00 per acre.

Also, one tract of 1,020 acres, about 100 acres of which is valley, the balance good grazing hills, is well watered and has enough wood on it to pay for it. Price, \$5.00 per acre. Also, one tract of 300 acres, 40 acres tillable, a portion can be irrigated from springs, has a large amount of wood on it and 500 rods of stone fence. Is well suited to running a small dairy, and raising pigs and chickens, by which a good living can be made, price \$2,000. The climate is choice, being shut in from the chilly coast winds, but has just breeze enough to make it pleasant, title perfect. The above lands lay contiguous. I will sell the whole or either one of the above tracts on easy terms—a liberal portion can remain at 10 per cent. per annum. If desired, will sell with the land, 1,500 head of Spanish Merino sheep. Come and see me, and am determined to sell. Address the undersigned at Napa City. WILLIAM CLARKE.

FINE RANCH FOR SALE.

One thousand six hundred acres of deeded land, in T. P. 19, N. R. 6 W., in Colusa County, situated near Stony Creek, on the county road, from Leesville to Elk Creek, comprising No. 1 farming land, and first-class grazing lands, all enclosed. Good house, seven rooms, well finished and painted. Two large barns, one wagon house, one wool house, large store house, wood house and other small buildings complete. Two good wells of pure cold water and a large spring of never-failing water running about one mile through the ranch. The house is surrounded with shade and ornamental trees. All the farming utensils and about 50 tons of hay will be thrown in if purchased soon. Any one wishing to engage in the dairy, or stock business of any kind, cannot find a better location in the State. Price, \$7.50 per acre, one half down and the balance to suit purchaser. For further particulars, apply to James W. Good, Colusa, or the undersigned.

DANIEL JOHNSON,

Elk Creek P. O., Colusa County, Cal.

FARM FOR SALE.

\$4,000.—Two Hundred Acres of
Land in Mendocino County.

Thirty miles from the county seat, and 20 miles from the Coast, one of the healthiest localities in the State, especially for consumptives. The place is fenced off in six different fields. Plenty of water and timber for all purposes. A good orchard. Vegetables of all kinds grow well. A good dwelling with six rooms, celled and painted inside, good frame barn, granary, storehouse, smokehouse, etc.

Also, Six Hundred acres of grazing land, well fenced, three miles from the above farm, plenty of water and timber for all purposes. Price, \$2,250.

For further particulars, address "B. T.," care of DEWEY & CO., Pacific Rural Press office, San Francisco, Cal.

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A personal experience of over ten years, and an extended acquaintance with the wants of employers and employees of the Pacific Coast, give us facilities not easily acquired for meeting the requirements of the public in every department of labor. Special attention given to procuring farm help of every kind, both male and female; experienced men for farm machines; MILK MEN, BUTTER and CHEESE MEN, MILL MEN, BLACKSMITHS, CARPENTERS, WHEELWRIGHTS, QUARRYMEN, SHEPHERDERS, ORCHARDISTS and GARDENERS.

We take special pains also to furnish the best of SCANDINAVIAN, GERMAN, FRENCH and IRISH DOMESTICS. Gentlemen connected with the office, and speaking these languages, give us extended acquaintance with this class of help, and enable us to furnish the best to be had in San Francisco at very short notice. All orders promptly attended, free of cost to the employer. Address by letter or in person,

CROSETT & CO., 623 and 625 Clay St.

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WHOLESALE DEALERS IN

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PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

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BARRETTO & CO., Downey City, Cal., breeders of thoroughbred Jerseys. Bulls and Bull calves for sale.

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M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

GEORGE McCracken, San Jose, Cal. Pure blooded Cotswold Sheep for sale.

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WILLIAM NILES, Los Angeles, Cal. Importers and Breeders of Thoroughbred Poultry. Eggs for hatching.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

C. P. STONE, San Francisco, Cal., Importer and Breeder of High Class White Leghorn Fowls.

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ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

A. J. TWOGOOD, Riverside, Cal., Importer and Breeder of Pure Bred Poland-China Hogs.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

BEES.

N. S. AMES, Napa City, Cal., Importer and Breeder of Italian Queen Bees. Queens imported from Europe, \$10 each. Tested Queens, \$3.

J. D. ENAS, of Sunny Side, Napa, Importer and Breeder of Italian Queen Bees from the best districts in Italy. Light or dark, tested homebred Queens, Nucleus, three frames if desired. Address as above.

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OAKLAND POULTRY YARDS.

Cor. Sixteenth and Castro Streets, Oakland

Constantly on hand and for sale, choice specimens of the following varieties of Fowls:

Dark and Light Brahmas, Buff White and Partridge Cochins, White & Brown Leghorns, Dorkings, Polish Hamburgs, Plymouth Rocks, Game and Sebright Bantams, Bronze Turkeys, Pekin, Aylesbury and Rouen Ducks.

EGGS FOR SALE AFTER JANUARY FIRST. No Inferior Fowls Sold at any Price. Satisfaction Guaranteed.

For further information send stamp for Illustrated Circular, to

GEO. B. BAYLEY,
P. O. Box, 659 San Francisco, Cal.

THOROUGHbred POULTRY.

116 Acres

DEVOTED TO

FANCY

POULTRY.

Unlimited Range.

Healthy Stock.

Largest Yards

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Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.

Safe arrival of Fowls and Eggs Guaranteed

Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents.

Send stamp for price list. Address

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EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

The Agents of this Paper and some of the Best and most careful Railroad men carry

NEW YORK WATCHES.

NONE ARE BETTER. Prices reasonable. Ask your Jeweler about them. Buy them of Geo. W. Finck, N. W. corner of Kearny and Geary Sts., S. F.

A JOB PRESS WANTED.

Any printer having an Eighth or Quarter Medium Job Press for sale, will please address J. P., care of Dewe & Co., S. F. State condition and lowest price.

Good Land and Sure Crops.

There has been steady and tolerably rapid advancement made in the growth of a majority of the towns in Colusa, Butte, Tehama and Shasta counties. Especially is this so in the agricultural districts where the land produces at least fair crops in all seasons—wet or dry—as does the land on the Reading Ranch. Those looking for homes in California where diversified farming will pay every year; where wood and water are plenty and easy to be obtained, and other desirable advantages are to be had, should address the proprietor of the Reading Ranch.

Some 14,000 out of 26,000 acres of the grant remain for sale at comparatively low rates, in quantities to suit purchasers, on easy terms. Prices range from \$5 to \$30 per acre. The tract is between two and three miles wide, with the Northern Division of the C. P. R. R. passing centrally through its entire length. Send postage stamp for an illustrated paper containing information about Shasta County and these lands, to the proprietor of Reading Ranch.

EDWARD FRISBIE.

Anderson, Shasta County, Cal.

GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

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A. D. LOGAN, (VICE PRESIDENT).
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SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis the will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

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Have located in Grass Valley, Wasco County, on the line of the Dalles Military Road, 20 miles from the Columbia River, between the Deschutes and John Day Rivers; 31 miles from the Dalles.

THE TOWN SITE

Is located on a small stream, fed by numerous springs, in the center of a beautiful rolling prairie, 50 miles long by 30 miles wide, of the very richest soil, heavily covered with fine bunch grass.

A Plenty of Government Land for All.

The climate is (unlike Western Oregon) dry and delightful, all kinds of Grain, Fruit and Vegetables, etc., grow perfection. Average wheat crop—46 bushels per acre.

640 Acres Secured for a Town-site and Called Lockville.

NO LIQUOR SALOONS OR CHINESE ALLOWED.

Hotels, Stores and a large number of Houses already in course of construction. Immigrants will do well to look at this location before going further north.

A Stage will soon leave the Dalles, (from the Pioneer Hotel,) daily for Lockville.

EASTERN OREGON COLONIZATION COMPANY.

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Coffee and Spices Have no Superior.

Twenty-Five Years Experience

IN THE BUSINESS ON THIS COAST ENABLES THEM TO PLACE ON THE MARKET THE VERY BEST GOODS AT THE LOWEST POSSIBLE PRICES.

Ask Your Grocer for Marden's Coffee and Spices.

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SPANISH MERINO SHEEP.

Guaranteed of pure blood and free from scab. Purchasers are invited to examine. About 10 minutes' walk from the Railroad, adjoining State University.

E. W. WOOLSEY,
Berkeley, Alameda County, Cal.

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Breeder and Importer of the "Crown Prince," "Sambo," and "Bob Lee" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.

PETER SAXE, Russ House, San Francisco, and Los Angeles City, Cal.

\$25 EVERY DAY Is warranted using JILZ WELL AUGERS and DRILLS. Took the first premium at the Great Exposition. They bore any diameter and depth; 100 feet a day, through earth, sand or rock. Pictorial auger hook free. Address Col. PETER SAXE, Los Angeles, Cal., Agent for Pacific States.

"Latimer Farm" Berkshires.

ALFRED, PARKER, Bellota, Cal.

PROPRIETOR.

—J—

Choice pigs of all ages and of the best quality and breeding constantly on hand. Have sold a great many pigs, (10 within a few days, including a trio to the State Insane Asylum at Stockton), and have yet to receive one word of dissatisfaction. Correspondence solicited and cheerfully answered. Address

ALFRED PARKER, Bellota,
San Joaquin County, Cal.

THOROUGHbred SPANISH MERINO SHEEP!

200 Extra Rams

For sale. Yearlings and two-year-olds. In size, quality and condition unsurpassed. Also, 100 ewes at prices to suit the times. The nucleus of this flock was from a purchase made from Severance & Pect in 1873. My ranch is at Haywards, Alameda county, and may be reached by rail from San Francisco, seven times daily. Parties desiring choice sheep should see this flock before purchasing elsewhere.

J. H. STROBRIDGE.

CHOICE PIGS FOR SALE.

I have a few fine Lancashire pigs for sale, now about four weeks' old. Bred from choice imported stock. Address

GRANT I. TAGGART,
Eighth Street, near Broadway, Oakland

NEW MUSIC! NEW MUSIC!

At Gray's No. 105 Kearny Street,

On receipt of the amount in postage stamps, any of the following pieces will be mailed, post-paid:

BABY MINE, (Song).....Smith, 35 cts.
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ALCANTARA, (Galop).....Chauncey, 75 cts.
GOLDEN OPHIR, (Galop).....Yanke, 50 cts.

Send for complete Catalogue of Music and Descriptive list of the



State where you saw this advertisement.

The Resources and History of Shasta County.—No. 5.

One Million Acres of Government Land.

We have been accustomed to believe that all the available government land was gobbled up by speculators. But at a moderate estimate the available and arable government lands of Shasta county embrace more than a million acres. Most of this will have to be cleared, but abundant fuel is a valuable item.

One of the advantages which the small farmer in Shasta has over his fellow-farmers elsewhere, is in the fact that he has the monopoly of a very

Lucrative Home Market.

The mines and lumber mills are constant consumers of all he can produce in the way of grain, hay, beef, or pork. In the fall, agents pass through the mountains to buy up all the available hogs at about six to seven cents live weight. The surplus fruit is sent to the mines; the grapes are dried and go to the Modoc region; vegetables are sold at the door. A better balanced, more self-productive community does not exist upon the face of the earth.

A Healthy Population.

The 7,000 people in Shasta county are healthy, happy and in the midst of abundance, with plenty of room for more settlers, and all this because their industries are diversified, and so the nimble dollar is kept moving, and each one gets a chance to feel it. Your correspondent has spent upwards of a year in Shasta county, and has yet to hear of any case of destitution, or any time when an honest man could not find work. This is partly because there are very few Chinamen in the county, some of the miners refusing to allow them to enter, and most of the people preferring to hire white men. The population is mainly American, sinewy and honest, good neighbors and warm friends.

As a summer resort few parts of the State can surpass Shasta in the month of June. The high Sierras deserve a month's camping in; a journey north and a climb of Mt. Shasta; a visit to the mines or sulphur springs—all these are worth doing. The botanist will find much that is new, and all his older favorites, *Aristolochias*, *Dicentra*, *Aquilegia*, *Liliums*, in great variety, the noblest of conifers. The geologist will find lava mounds and volcanic rocks, beds of old lakes, ravines hewn by ice-chisels, fossils, petrifications, agates, carnelians, crystals of every description—possibly new ledges of mineral. The artist can paint the bluest of rivers, the knottiest of trees, the fairest of blooming slopes, the purest battlements of snow.

To condense, in brief statements,

The Present Condition

Of Shasta county: The placer mines still pay something in several localities. Hydraulic mining is increasing. Quartz ledges are being found almost daily and capital is taking hold. Other minerals abound, although little attention has been given them. Stone of fine quality is abundant.

The farmers, as a class, live easily. Most of the farming is done in an easy sort of a way. The soil is rich and the rainfall is so great that crops have never yet failed. The home market is good, and prices are high. Fruit trees and nut trees succeed everywhere. Oranges are now growing in the Reading grant, and have set fruit. Farming interests are looking up all over the county.

The climate is all that could be desired, and differs but 1° in mean temperature from that of Livermore, Alameda county. A little snow falls in the valley during exceptional years, but the fruit crop is rarely injured.

Improvements.

New roads are being cut through the mountains in every direction. The Oregon travel this year has been greater than ever before. A goodly number of settlers remain in Shasta, and a general feeling of prosperity pervades affairs. There is room for more small farmers, for more cattle, sheep and hog raisers, for more lumber men, and for more miners with capital. There is room for any man with two strong hands and a few dollars to live on whilst he looks around. There is no call for Chinamen, gamblers, bummers, or political carpet-baggers.

SIERRA FLUME AND LUMBER COMPANY.—We regret to announce that this large lumbering association has been compelled to suspend operations and assign its property. A dispatch from Chicago says: The Company publish a card this afternoon in the *Record*, announcing that all the workmen engaged by them who have preferred claims to the amount of \$100 for services, will be paid promptly by the assignees. Many of the hands have sold their claims already for 60 or 70 cents on the dollar. The general opinion is gaining ground that the mills will not be started up again this season, but there are several million feet of lumber already cut which will be flumed down to the dumps at Chico and Red Bluff before the close of the lumber season.

PORTABLE BOARDING-HOUSES.—A correspondent writing from Modesto to the *Stockton Independent* says: Some threshing men have inaugurated a plan of providing meals for the hands, which is greatly in favor of the farmers, especially of the farmers' wives. It consists of a boarding tent, or portable restaurant, furnished by the proprietor of the machine. The cost of threshing the grain, including the board of the men, is eight cents per bushel.

Sudden Death of Mr. Friedlander.

Isaac Friedlander, whose name is famous through his grain dealings, died suddenly from heart disease at his home in this city on Thursday morning, July 11th. The *Alta* gives the following sketch of his life: Mr. Friedlander was born of Jewish parents, in Oldenburg, Germany, in April, 1825, which would make him only 54 years at the time of his death. He came to this country when but a boy of 12 years of age, landing at New York, where he spent several years, and received the first lessons in his mercantile education. From New York he went South, and while living in Charleston, S. C., he was married to a Miss Valentine, of that city. He took passage for San Francisco in the *South Carolina*, arriving here in July, 1849. He went at once to the gold fields, where he remained, however, only a few months, returning to San Francisco in the winter of the same year. He at once engaged in mercantile pursuits. The first thing that called attention to his powers of combination in business matters was the celebrated corner in flour, in which he was the prime mover, and which netted a large sum to those engaged in the operation. With his share of the profits, Mr. Friedlander engaged in the importation of grain from Oregon, and became one of the owners of the Eureka Flour Mill, the largest establishment of the kind on this coast. His career was one of uninterrupted prosperity until 1856, when a combination of flour dealers forced him to the wall, and he was obliged to suspend. After a thorough examination of his affairs, his creditors gave him a discharge from his indebtedness, and he at once resumed business. In the meantime the country had been opened up, and it was necessary to find an outlet for the immense crops of grain. Mr. Friedlander saw an opportunity to open up a direct trade with England, and in 1855 the first vessel was loaded and despatched. He soon established such business connections abroad that it seemed almost hopeless for anyone to attempt to compete with him, and gradually he absorbed almost the entire export business in grain. His name became as familiar on the exchanges of Europe and the Eastern States as it was in this own city, until he became known as "The Grain King."

Mr. Friedlander's unbounded faith in the agricultural resources of the State and the wealth to be derived from the soil led him to invest largely in lands in the San Joaquin valley. Large sums of money were spent in fencing, irrigating and improving these lands, but just when they were expected to bring in a return, the dry season of 1876-77 came on, and Mr. Friedlander was obliged to effect a compromise with his creditors. Everything he had was given up for their benefit, and he resumed business in a few weeks after his suspension, but bought from that time principally on orders from English correspondents.

Fatal Heat in the Western States.

This (Wednesday) morning's dispatches bring accounts of fatal heat throughout the prairie States, the greatest destruction of human life being in St. Louis. The following are notes concerning the severe visitation. The total number of deaths in St. Louis on Wednesday from heat were 54. Even children are falling victims, and the mortality among infants is greater than ever known, except in time of epidemics.

Twenty-four bodies which had been at the Morgue Monday without being claimed were buried in Potter's field late last night. They were terribly swollen and discolored, and presented a most horrible sight. The whole number of burial permits issued Tuesday was 49, of which 28 were persons whose death was caused by heat. This is but a trifle over one-half of the death rate of Monday. The heat Tuesday afternoon was more moderate, and at night there was a fine breeze which cooled the atmosphere considerably.

At Chicago on Tuesday the thermometer reached 97° and there were some 25 cases, more or less severe, of sunstroke. Six proved fatal. Among the deaths are Rev. E. W. Clark, formerly a Congregational missionary to the Sandwich islands, who was prostrated by the heat on Sunday, but lived until Tuesday. He was 79 years old, and one of the best known missionaries in the country.

Reports from points throughout the north-west give accounts of terrible effects of the heat. In De Witt, Iowa, Charles Heicker and H. Roloff, Germans, died from the effects of the heat. At Galesburg, Illinois, several deaths and many cases of sunstroke are reported. At Des Moines, Capt. Jos. May, of Rock Island, well known in political circles there and at Washington, lies in a critical condition from the effects of sunstroke. At Bloomington, Michael O'Neil, Mollie Hogan, Jesse Passwater and an unknown laborer, were struck by the sun and died soon after. Some 20 other cases, none fatal, are reported, and horses suffered terribly. These are but isolated cases, taken at random, for nearly every town in the north-west has one or more cases to report. The thermometer has ranged generally from 90° to 110°.

Notices of Recent Patents.

Among the Patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

AUTOMATIC WEIGHING DEVICE AND REGISTER.—J. C. Hunt, Sheridan, Placer county, Cal. The improvements are in devices for automatically weighing and registering grain and other substances. They consist in a rotating, self-discharging weighing scale, having a vertical movement, by which its position is changed when full or empty, and this alternate change of position is made the means of operating a gate or valve, to shut off and admit the material to the scale and also operate the registering device. The operation of continued weighing, discharging and recording will continue as long as material is supplied to the machine.

SIDEWALK HATCHWAY.—Peter H. Jackson, S. F. This invention relates to certain improvements in that class of doors which are employed to close openings in sidewalks and other places where it is desired to have a door which shall be perfectly water-tight when closed and also level and flush, without any external projection, and it consists in a novel construction of hinges and also in the employment, in combination with the doors and frame, of a series of grooves or gutters, so placed as to catch any water which may enter through the joints around the outside or meeting edges and convey it off without allowing it to fall into the area or space below. It also consists in combining with the doors and their meeting edges of a combined bearing bar and gutter, said gutter being connected with those at the sides, so as to convey off all the water which may come in from any direction.

The Fair Season.

The following is a partial list of the coming fairs. We shall be pleased to add to it if readers will send us the dates and locations of their respective exhibitions:

San Francisco Mechanics' Institute, San Francisco, August 13th to September 14th.
California State Agricultural Society, September 16th to 21st, inclusive.
Oregon State fair, at Salem, October 8th to 18th, inclusive.
Nevada State Agricultural, Mining and Mechanical fair, at Reno, October 7th to 12th, inclusive.
Montana Agricultural, Mineral and Mechanical fair, at Helena, September 23d to 29th, inclusive.
Sonoma and Marin district fair, at Petaluma, September 23d to 28th, inclusive.
San Joaquin valley district fair, at Stockton, September 24th to 28th, inclusive.
Northern district fair, at Marysville, September 23d to 28th, inclusive.
Golden Gate district fair, at Oakland, September 9th to 16th, inclusive.
Napa and Solano district fair, at Vallejo, September 3d.
Monterey county district fair, at Salinas City, October 15th to 19th, inclusive.
Siskiyou county fair, at Yreka, October 2d to 5th, inclusive.
El Dorado county fair, at Placerville, September 13th to 15th, inclusive.
Santa Clara valley fair, at San Jose, September 30th to October 5th, inclusive.
Stanislaus County Stock Growers Fair, at Modesto, October 9th to 11th, inclusive.
Southern California Horticultural Fair, at Los Angeles, October 14th to October 19th, inclusive.
Southern California Agricultural Society's fair, at Los Angeles, October 14th to October 19th, inclusive.

THOROUGHbred SHEEP.—Those desiring to improve their flocks will do well to examine the Spanish Merinos advertised in the *PRESS*, by Mr. E. W. Woolsey, of Berkeley. We lately examined the flock, and found the animals clean, healthy and showing their good blood at all points.

OUR POSITION.—The PACIFIC RURAL PRESS has commenced its sixteenth volume. It is the leading agricultural journal of the Pacific coast. No farmer can well afford to be without such a journal, and this one is always full of interesting matter to farmers. —*Rio Vista Enterprise*.

Woodward's Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a boa-constrictor have just been added. New stars are constantly engaged for the Pavilion exercises. Rates of admission as usual.

POPULAR MUSIC.—Make your homes merry and popular with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. The *RURAL PRESS* can offer to introduce you there.

SETTLERS and others wishing good farming lands for sure crops, are referred to Mr. Edward Frisbie, of Anderson, Shasta County, Cal., who has some 15,000 acres for sale in the Upper Sacramento Valley. His advertisement appears from time to time in this paper.

A GREAT COMPLIMENT.—A Grand Piano from Steinway & Sons, New York, which we saw and heard in Dr. Franz Liszt's Music Room, we must acknowledge as the grandest creation that modern science, in Piano building, has produced. From the *New Leipzig Musik Zeitung*.

AYER & SON'S MANUAL contains more information of value to advertisers than any other publication. Sent free. Address N. W. Ayer & Son, Advertising Agents, Times building, Philadelphia.

MR. W. J. WOOLLEY, who took out a Canadian Patent some four years ago, is requested to call at the MINING AND SCIENTIFIC PRESS PATENT AGENCY OFFICE, Business of importance.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 17th, 1878.

The chief note of the week is found in the Wheat trade. Just after the *PRESS* was printed last week there was an advance both here and abroad, and considerable excitement was rife in all Wheat markets. Although there has been some little reaction from this advance, the feeling among holders is very strong and prices are now quotable at a little advance upon this day last week. The reduced yield in this State through the rust in some parts and the shrunken grain which is coming in, go to raise the price on all good shipping lots. It is reported also that harvest prospects in some other producing counties are not as good as they were a few weeks ago.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.		CLUB.	
Thursday.....	9s 11d@10s	2d	10s 3d@10s	8d
Friday.....	9s 11d@10s	4d	10s 4d@10s	8d
Saturday.....	10s —@10s	4d	10s 4d@10s	8d
Monday.....	10s —@10s	4d	10s 4d@10s	8d
Tuesday.....	10s —@10s	3d	10s 3d@10s	8d
Wednesday.....	10s —@10s	3d	10s 3d@10s	8d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.		Club.	
1876.....	9s 9d@10s	1d	10s —@10s	5d
1877.....	12s 2d@12s	5d	12s 5d@12s	—
1878.....	10s —@10s	3d	10s 3d@10s	8d

The Foreign Review.

LONDON, July 16th.—The *Mark Lane Express*, says: Wheat now looks strong and healthy. Wheat ears in certain districts are complained of as puny, compared with the luxuriant growth of the rest of the plant, and not well filled with grain. Although the dry atmosphere and sunshine have done wonders in improving the prospects of the crops, it should not cause surprise if the yield on threshing reveals a deficiency, as the excessive moisture from which the plant suffered will probably form some disease behind it. In Scotland the weather has been seasonable. The Cereal crop is maturing satisfactorily. Barley does not seem to have sustained so much injury as in England. Oats are sadly thinned by the grub. Similar advices have been received from Ireland, but it is disheartening to find that disease has broken out in Potatoes, to which the earlier sorts have already succumbed. Should the weather prove wet, there is little doubt that the main bulk of tubers will be irretrievably ruined.

There are unmistakable signs of improvement in Wheat, and although the continuance of heavy arrivals into London and Liverpool prevented prices from advancing to any quotable extent, a healthy tone and great steadiness were maintained by the freedom with which millers have operated, and higher offers and diminished shipments from the United States to Russia. With moderate arrivals at ports of call, the floating cargo trade for Wheat was very firm for forward shipment. There was an active demand for United Kingdom and Continent direct.

Freights and Charters.

The freight market continues inactive. The nominal rate for Wheat to Liverpool is £2 5s to £2 7s, the outside for iron ships. The bark *Lesmona*, 1,100 tons, was taken for Wheat to Cork prior to arrival at £3; the ship *Rance*, 1,264 tons, and the *Abbey Town*, are also under home charters for Grain. There are now in port 49,787 tons shipping engaged for Wheat, 9,977 for General Merchandise, and 50,933 tons disengaged. The list of vessels known to be on the way amounts to 237,374 tons.

Unfavorable Turn in the Western Crops.

MILWAUKEE, July 16th.—A special to the *Wisconsin*, from La Crosse, Wisconsin, says: Dispatches received here to-day and yesterday from various points along the line of the Southern Minnesota railroad show that the severe rain and wind storms, with the intense heat of the past week, have reduced the prospects of Wheat and Oat crops about one-third by rust, lodging and shrinkage. Reports from Houston, Fillmore, Mower, Faribault, Freeborn and Blue Earth counties are unfavorable. If the showers and heat continue, much of the Wheat will be of inferior quality. The points heard from cover a distance of 200 miles west of the Mississippi.

Condition of Crops in Oregon.

PORTLAND, July 11th.—During the month of June the weather was unusually warm and dry. There was really no rain worth mention, though the average for that month usually exceeds two and one-half inches. In consequence of the heat and drouth, late-sown grain in many localities was checked in its growth, and looked very unpromising. So far in July the days have mostly been cloudy and cool. In many places considerable rain has fallen. Weeks ago this weather would have been more seasonable. It would have done the growing crops far more

good then than it can possibly do now. Information has been received from several places that a great improvement in crop prospect is noticeable during the past ten days. The cool weather gives grain a chance to recover, and there will be a fair yield where a total failure was feared. In Umpqua valley the rain on the third and fourth was more general than in Willamette, and the prospects are good for a full average yield. Some of the great wheat-growing counties of Willamette valley will not have the usual crop this year, and portions of Marion and Polk fare similarly. In almost every county of the valley there are localities where the yield will be cut down. From Walla Walla and the wheat region of the Upper Columbia there probably will be as large a surplus for shipment as last year, notwithstanding the fact that in some places there is a partial or total failure.

Eastern Grain Markets.

NEW YORK, July 13th.—The rise in bread-stuffs last week has not been sustained, the unexampled magnitude of the wheat harvest militating against all artificial effects to sustain prices above the level of foreign markets. Western speculators, having a good thing out of June contracts, are now disposed to let the market take its course. In the grain market the prices of Wheat have fluctuated materially, the demand for export having been very limited. The closing rate was \$1.10@1.11 for No. 1 Milwaukee Spring; \$1.07 for No. 2 do, and \$1.05@1.06 for No. 2 Chicago.

CHICAGO, July 13th.—During the past week the grain markets have been fairly active, with occasional excitement, and prices have been higher. Wheat opened weak and lower, but steadily advanced in price until to-day, when rates dropped again under unexpected heavy receipts. Sales for August were at 80¢@85¢. Corn was higher throughout, but as a rule followed the fluctuations of Wheat. Sales of August at 37¢@39¢. Oats were exceptionally strong, and did not give way to the ordinary pressure to sell. During the fall in prices to-day Oats went up, instead of declining in sympathy with Wheat and Corn. Sales of August at 22¢@23¢. Rye took a turn upward, cash selling from 48¢ to 50¢. Barley was also firm at 48¢@49¢. Provisions were unsettled, but on the whole much stronger than for the preceding week. The best of prices were paid in the middle of the week. Sales of August, Pork at \$9.15@9.57, and Lard, \$6.80@7.21. Closing cash prices are: Wheat, 85¢; Corn, 37¢@37½¢; Oats, 26¢; Rye, 49¢@50¢; Barley, 48¢; Pork, \$9.20; Lard, \$6.82.

Eastern Wool Markets.

NEW YORK, July 13th.—The Wool market has exhibited a greater degree of animation, but taken as a whole no positive improvement in condition can be noted. The supply of California Spring and Texas is quite large, and for the former sales have reached quite a respectable figure, due by increased inquiry from blanket, flannel and felt goods manufacturers. California Spring is still held with considerable confidence, the firm and slightly higher rates for fleeces exerting a favorable influence. Fleeces are arriving quite freely, but dealers are less anxious than sellers, owing to the uncertain condition of affairs in the country. Here new X and above Ohio has realized 36¢@38¢, and Pennsylvania 35¢; and the opinion gains ground that but little variation from these rates need be looked for during the remainder of the season. In the country there is now little or no excitement; but the stock is being taken with considerable freedom at about the rates current this day week. The sales of the week embrace 55,000 lbs Spring California, 22¢@30¢; 140,000 lbs Western Texas, 15¢@24¢; 24,000 lbs Spring do, 20¢@26¢; 108,000 lbs new X and above Ohio, 36¢@38¢; 30 bags tub-washed, 38¢.

BOSTON, July 13th.—The Wool improvement noticed last week continues, the demand being active for nearly all grades of domestic, with large transactions, amounting to upwards of 2,500,000 lbs for the week and a very firm market. The new clip from the West has been arriving quite freely. Prices compared with current rates in the interior are low, and it is not surprising that manufacturers have been disposed to purchase more freely than for some time past, especially as a lower range of prices can scarcely be looked for at present. All the new Wool houses here are free sellers at current rates. Sales include Ohio and Pennsylvania Fleeces No. 1, X, XX and above, at 36½¢@38½¢; Michigan Fleeces, No. 1 and X, 35¢@36¢; Wisconsin and Indiana, 35¢@36¢; washed, combing and delaine Fleeces, 38¢@43¢; unwashed combing, 28¢@30¢; Territory, 20¢@26¢; Texas, 16¢@27¢; super and X pulled, 30¢@39¢; scoured, 55¢@70¢; California is in demand; X pulled steady and firm. Sales 258,000 lbs Spring at 20¢@30¢; the only sale of Fall was 5,200 lbs at 13½¢.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. June 26.	WEEK. July 2.	WEEK. July 10.	WEEK. July 17.
Flour, quarter sacks..	31,701	13,503	29,645	28,827
Wheat, centals.....	37,945	53,676	101,305	113,742
Barley, centals.....	22,600	18,157	14,523	19,132
Beans, sacks.....	365	139	459	218
Corn, centals.....	2,003	9,796	10,876	1,760
Oats, centals.....	6,167	6,154	1,530	1,710
Potatoes, sacks.....	9,388	6,747	8,387	13,525
Onions, sacks.....	864	673	530	396
Wool, bales.....	5,856	2,249	3,824	2,770
Hops, hales.....	22	—	42	—
Hay, bales.....	1,742	1,789	1,234	2,416

BAGS—Prices are unchanged. The ring are

reported to be selling at full prices, one sale of 250,000 Grain Bags being mentioned to us.

BARLEY—The outlook for Barley prices seems better than was anticipated. Receipts are now small and it is thought a strictly choice article might touch \$1. The export trade has begun with a cargo for Peru. If the East will take a good hold of our Barley this year, it will prove remunerative to growers after all. We note sales: 5 car-loads new Feed at 95¢; 400,350 and 100 sks new sold at 92¢ ctl; 800 cts bright heavy new at 95¢, and 200 do at the same, and 1,200 old Brewing at \$1.12½ ctl.

BEANS—Supplies are much reduced and prices firm.

CORN—Business is small owing to a scarcity of material, either native or imported. 100 sks Omaha Corn sold at \$1.90 ctl; 200 sks small Yellow California sold at \$2.05 ctl, which about exhausts the supply.

DAIRY PRODUCE—There is no change in the butter market either in condition or price. Dealers report the market more discouraging than they ever knew it before. Many outlets in the country seem cut off, and there is no opportunity to reduce supplies. Cheese is a little lower, and some of low grade is sold at a sacrifice.

EGGS—Eggs are doing about 1c better on the dozen.

FEED—Bran has advanced \$1 per ton; and Cornmeal now reaches \$42 per ton for the best. The Hay receipts are bringing in some Wheat Hay of choice quality, and this raises the range of price a little. We note sales of about 2,000 bales Wheat Hay at \$13@14 per ton. Low grade Hay is abundant. Sales are made as low as \$6.50 for poor stock.

FRESH MEAT—Fresh Meats are selling at the advance gained last week. Supplies are abundant and most of the offering is of good quality.

FRUIT—Early White Grapes are coming in more freely. Nectarines have made an appearance. Bartlett Pears are selling well and the Eastern shipment has begun. Prices of different fruits may be found in our tables.

HOPS—There is nothing new locally. Emmet Wells reports the New York market, for the week ending July 6th, as follows: "Trade has been quiet this week, the scorching weather keeping buyers indoors. Receipts show a heavy increase; and as the exports have been small, stocks have accumulated. Prices remain unchanged, the late advance still keeping up; but holders are quite ready sellers when they get the chance, which is pretty good proof that they do not take much stock in bad crop reports. Our reports from most of the Hop districts are conflicting except that the greater portion of them point to a smaller yield than last year, but we consider it to early too make an estimate on the number of bales that will be produced. Lice are pretty general and may do much mischief later on; but our experience has been that an early visitation of vermin on the vine has most always been followed by clean yards in August."

LIVE STOCK—We hear of sales of 200 Sheep at \$2.15 each; 345 do at \$2.55 each; 117 Cattle at 4½¢ lb, alive; 69 Calves at \$10 each; 600 Lambs at \$1.85 each; all gold. Also 1,000 Hogs at 5¢@5½¢ lb, silver.

OATS—Oats are firmly held and the late advance is retained. We note sales of 200 sks good Feed at \$1.50; 220 sks fair, \$1.40; 250 do, \$1.45 ctl. A lot of 230 sks good Oregon Feed sold at \$1.42½ ctl.

ONIONS—Onions are a shade lower for all grades.

POTATOES—Potatoes have undergone a marked decline. Receipts are large and abundance of fruit, etc., seems to lessen the demand. Prices are given in our table.

PROVISIONS—The demand for Provisions is strong and prices well maintained at quotations. Oregon Meats are being received in small invoices by each steamer.

VEGETABLES—Asparagus is scarce and higher. Carrots, Cucumbers, Summer Squash and Turnips are reduced. Old Marrowfat Squash is advanced to \$35 per ton. There is some new Marrowfat just in, but price not yet fixed. New Garlic is to-day in request and it is likely 3c could be had for it.

WHEAT—Sales have been at the advance described above. We note sales during the week as follows: 1,000 cts choice old Milling, delivered at Oakland, at \$1.77½; 3,000 do at \$1.72½; 1,000 do at \$1.70; 200 do new Milling at \$1.70; 800 do fair new Milling at \$1.67½; 2,500 do new Shipping at \$1.65; 2,500 do fair do at \$1.63½; 10,000 do choice new Milling at \$1.65; and 3,600 do good Shipping at \$1.62½; 1,600 cts new for export, \$1.68½; 400 do, \$1.65; 500 fair Milling, \$1.67½; 500 inferior do, \$1.57½; 5,200 good new Shipping, \$1.62½; 6,000 good new Milling, \$1.65; and 10,000 choice old Milling, \$1.70; 3,000 cts new Shipping at \$1.70; 2,000 cts Shipping sold, delivered at Oakland wharf, at \$1.65; and 3,700 cts good Milling, at Vallejo, at \$1.65; 2,300 choice old Milling at \$1.75; 500 do at \$1.77½; 3,000 good new Shipping at \$1.67½; 1,100, 2,000, 4,000, 2,000 and 5,000 do at \$1.65; and 6,000 at \$1.62½ per ctl.

WOOL—Quotations are unchanged. The great bulk of the Wool is cleaned off and there is little of the better qualities now on hand. We note sales: 25,000 lbs Northern selected burry and scedy, 19¢; 8,000 lbs slightly burry Northern, 18¢; 160,000 lbs San Joaquin, Nevada and Oregon, 15¢@24¢.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., July 17, 1878.

BEANS & PEAS.		FILBERTS.	15 @ 16
Bayo, cts.....	5 75 @ 60	ONIONS.	
Butter, cts.....	4 25 @ 45	Alviso.....	— @ —
Poa.....	— @ 75	Union City, cts.....	— @ —
Red.....	— @ 75	San Leandro.....	95 @ 100
Pink.....	6 25 @ 60	Stockton.....	62½ @ 75
Sm'l White.....	— @ 75	Sacramento River.....	— @ —
Lima.....	4 25 @ 40	San Pedro.....	50 @ —
Field Peas.....	1 10 @ —	Oregon.....	— @ —
BROOM CORN.		POTATOES.	
Old.....	3½ @ 7	Petaluma, cts.....	— @ —
New.....	4½ @ 8	Humboldt.....	— @ —
CHICORY.		Cuffey Cove.....	— @ —
California.....	4 @ 4½	Early Rose.....	1 50 @ 1 75
German.....	6½ @ 7	Half Moon Bay.....	1 00 @ 1 50
DAIRY PRODUCE, ETC.		Kidney.....	— @ —
BUTTER.		Sweet.....	— @ —
Cal. Fresh Roll, lb.....	19 @ 22	Salt Lake.....	— @ —
Fancy Brands.....	24 @ 25	POULTRY & GAME.	
Pickle Roll, new.....	22½ @ 24	Hens, doz.....	8 00 @ 9 00
Firkin, old.....	22 @ 24	Roosters.....	6 00 @ 8 00
Western Reserve.....	12½ @ 14	Broilers.....	3 00 @ 4 50
New York.....	— @ —	Ducks, tame.....	4 00 @ 6 00
CHEESE.		do, Mallard.....	— @ —
Cheese, Cal., lb.....	8 @ 11	Geese, pair.....	1 25 @ 1 75
Eastern.....	10 @ 12	White Gray, doz.....	— @ —
N. Y. State.....	4 @ 5	White.....	— @ —
Gilroy Factory.....	11 @ 13	Turkeys.....	20 @ 23
EGGS.		do, Dressed.....	— @ —
Cal. fresh, doz.....	27½ @ 29	Snipe, Eng.....	— @ —
Ducks.....	23 @ 24	do, Common.....	— @ —
Oregon.....	24 @ 25	Rabbits.....	1 50 @ —
Eastern.....	18 @ 22	Hare.....	3 00 @ 4 00
do Pickled.....	— @ —	SEEDS.	
FEED.		Cal. Bacon, Hvy, lb.....	11 @ 11½
Bran, ton.....	— @ 16 00	Medium.....	11½ @ 12½
Corn Meal.....	41 @ 42	Light.....	12½ @ 13
Hay.....	7 00 @ 14 00	Lard.....	11 @ 13
Middlings.....	21 @ 22	Cal. Smoked Beef.....	10 @ 11
Oil Cake Meal.....	34 @ —	do, Eastern.....	— @ —
Straw, bale.....	25 @ 60	Shoulders, Cover'd.....	11½ @ 12½
FLOUR.		Hams, Cal.....	15 @ 16
Extra, bbl.....	4 00 @ 5 50	Dupee's.....	14 @ 15
Superfine.....	4 25 @ 4 37½	Boyd's.....	14 @ 15
Graham, lb.....	3½ @ 3½	Davis Bros.....	— @ —
FRESH MEAT.		None Such.....	15 @ 15½
Beef, 1st quality, lb.....	5½ @ 7	Ames.....	15½ @ 16
Second.....	4½ @ 6	Whittaker.....	14 @ 14½
Third.....	3½ @ 4½	SEEDS.	
Mutton.....	4 @ 6	Alfalfa.....	5 @ 12
Spring Lamb.....	6 @ 6	Canary.....	6 @ 8
Pork, undressed.....	5½ @ 5½	Clover, Red.....	15 @ 16
Dressed.....	7½ @ 7½	White.....	50 @ 55
Veal.....	6 @ 8	Cotton.....	6 @ 10
Milk Calves.....	6 @ 7½	Flaxseed.....	3½ @ —
GRAIN, ETC.		Hemp.....	6 @ —
Barley, feed, cts.....	80 @ 95	Italian Rye Grass.....	35 @ —
Brewing.....	12 @ 15	Perennial.....	35 @ —
Chevalier.....	1 50 @ —	Millet.....	10 @ 12
Buckwheat.....	1 30 @ —	Straw, White.....	4 @ —
Corn, White.....	2 10 @ 25	Mustard.....	2½ @ 3
Yellow.....	1 95 @ 20	Rape.....	3 @ 4
Small Round.....	2 00 @ 20	Ky Blue Grass.....	20 @ —
Oats.....	1 25 @ 50	2d quality.....	18 @ —
Milling.....	1 55 @ 65	Sweet V Grass.....	1 00 @ —
Rye.....	1 12½ @ 15	Orchard.....	25 @ 30
Wheat, Shipping.....	60 @ 65	Red Top.....	18 @ 20
Milling.....	1 70 @ 80	Lawn.....	8 @ 10
HIDES.		Mesquit.....	— @ 25
Hides, dry.....	14 @ 15	Timothy.....	9 @ —
Wet salted.....	8 @ 9½	TALLOW.	
Beeswax, lb.....	30 @ 31	Crude, lb.....	7½ @ 8
Honey in comb.....	12 @ 12½	Refined.....	9½ @ 10
do, No 2.....	8 @ 10	WOOL, ETC.	
Dark.....	8 @ 9	S Joaquin, 12mo free.....	17 @ 19
Strained.....	6½ @ 7	do 6 & 7 mo do.....	15 @ 18
HOPS.		Burry, 12 mo.....	13 @ 16
Oregon.....	4 @ 5	do 6 mo.....	14 @ 16
California.....	4 @ 7	Scabhy.....	12½ @ 15
Wash. Ter.....	4 @ 6	South Coast, free.....	16 @ 19
NUTS—Jobbing.		do do burry.....	14 @ 16
Walnuts, Cal.....	8 @ 9	do do cherry, free.....	23 @ 25
do Chile.....	7 @ 8	do do, scedy & burry.....	22 @ 23
Almonds, hd sh lb.....	7 @ 8	Nevada.....	18 @ 22
Soft sh lb.....	14 @ 16	Oregon Valley.....	22 @ 24
Brazil.....	14 @ 16	do, Eastern.....	17 @ 20
Pecans.....	13 @ 14		
Peanuts.....	5 @ 6		

FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., July 17, 1878.

FRUIT MARKET.		White.....	6 @ 8
Apples, basket.....	30 @ 60	Peaches.....	8 @ 10
do, box.....	40 @ 125	Pears.....	4 @ 7
Apricots, hx.....	1 00 @ 1 25	Plums.....	3 @ 14
Bananas, buch.....	2 50 @ 3 00	Pitted.....	12½ @ 14
B cherries, chst 3.....	5 00 @ 6 00	Prunes.....	11 @ 10
Cocoanuts, 100.....	5 00 @ 6 00	Raisins, Cal bx 100.....	1 66 @ 1 66
Figs, lb.....	5 @ 6	do, Halves.....	1 50 @ 2 00
Gooseberries, lb.....	6 @ 8	do, Quarters.....	1 50 @ 2 50
Grapes, lb.....	6 @ 10	Blowers.....	2 75 @ —
Limes, Mex.....	10 @ 12	Malaga.....	2 75 @ 3 00
do, Cal per M.....	15 @ 15	Zante Currants.....	8 @ 10
Lemons, Cal M.....	15 @ 15	VEGETABLES.	
Sicily, bx.....	9 00 @ 10 00	Asparagus, box.....	1 50 @ —
Mangoes, 100.....	3 00 @ 4 00	Beets, cts.....	62½ @ —
Oranges, Mex.....	22 @ 25	Beans, String.....	1 @ 1½
Tabiti.....	10 @ 20	Cabbage, 100 lbs.....	56 @ —
Cal.....	— @ —	Cantaloupes, doz 2.....	50 @ 3 50
Peaches, box.....	40 @ 1 00	Carrots, cts.....	50 @ 62½
do, basket.....	30 @ 1 00	Cauliflower, doz.....	50 @ 75
Pears, box.....	75 @ 1 75	Cucumbers, bx.....	25 @ 40
do, Bartlett.....	1 50 @ —	Garlic, New, lb.....	2 @ 3
Pineapples, doz.....	4 00 @ 6 00	Green Peas.....	11 @ 12
Plums, basket.....	35 @ 75	Lettuce, doz.....	10 @ —
Prunes, basket.....	1 25 @ 1 50	Parsnips, lb.....	2 @ —
Raspberries, lb.....	6 @ 7	Horseradish.....	7 @ 8
St'wberries, chst 2 50.....	4 00	Rhubarb.....	1 @ —
DRIED FRUIT.		Squash, Marrow.....	35 @ —
Apples, lb.....	5 @ 7	fat, th.....	20 @ 30
Apricots.....	10 @ 12½	Tomato, 30 lbs bx.....	25 @ —
Citron.....	20 @ 24	do, 60 lbs bx.....	75 @ —
Dates.....	9 @ 10	Turnips, cts.....	75 @ —
Figs, Black.....	4 @ 7	White.....	50 @ —

METALS.

[WHOLESALE.]

WEDNESDAY M., July 17, 1878.

IRON.		American Pig, ton.....	23 00 @ 30 00
Scotch Pig, ton.....	23 00 @ 30 00	White Pig, ton.....	23 00 @ 30 00
Oregon Pig, ton.....	— @ —	Refined Bar.....	2 @ 3
Horse Shoes, keg.....	5 00 @ —	Nail Rod.....	— @ 7
Norway, Oval.....	— @ 7	COPPER.	
Sheathing, lb.....	34 @ 35	Sheathing, Yellow.....	21 @ —
Sheathing, Old Yellow.....	12 @ —	Composition Nails.....	24 @ —
Composition Bolts.....	24 @ —	STEEL.	
English Cast, lb.....	13 @ 14	Anderson & Woods, ordinary sizes.....	15 @ —
Drill.....	15 @ —	Flat Bar.....	14 @ 19
Plow Steel.....	8½ @ 12½	TIN PLATES.	
10x14 1 C Charcoal.....	7 50 @ 8 50	Banca Tin.....	23 @ 24
Australian.....	17 @ 17½	ZINC.	
By the Cask.....	9 @ —	Zinc, Sheet 7x3 ft, 7 to 10, lb.....	9 @ 10
7x3 ft, 11 to 10.....	10 @ —	8x4 ft, 8 to 10.....	11 @ —
8x4 ft, 11 to 10.....	11 @ —	NAILS.	
Assorted sizes.....	3 15 @ 3 25	QUICKSILVER.	
By the lb.....	43 @ 45		

LEATHER.

[WHOLESALE.]

WEDNESDAY M., July 17, 1878.

Sole Leather, heavy, lb.....	22 @ 24
Light.....	20 @ 24
Jodot, Khl, doz.....	48 00 @ 50 60
11 to 13 Kil.....	50 00 @ 50 60
14 to 19 Kil.....	80 00 @ 80 00
Second Choice, 11 to 16 Kil.....	55 00 @ 70 00
Cornellian, 12 to 16 Kil.....	57 00 @ 60 00
Females, 12 to 13 Kil.....	63 00 @ 67 00
14 to 16 Kil.....	71 00 @ 76 00
Simon Ulmo, all colors, doz.....	58 00 @ 62 50
14 to 15 Kil.....	58 00 @ 70 00
16 to 17 Kil.....	58 00 @ 70 00
Simon, 18 Kil.....	61 00 @ 63 00
20 Kil.....	65 00 @ 67 00
24 Kil.....	72 00 @ 74 00
Robert Calf, 7 and 9 Kil.....	35 00 @ 40 00
Kips, French, lb.....	1 00 @ 1 35
Cal. doz.....	40 00 @ 60 00
French Sheep, all colors, doz.....	1 00 @ 1 25
Eastern Calf for Backs, lb.....	1 00 @

Agricultural Articles.

To Threshers.

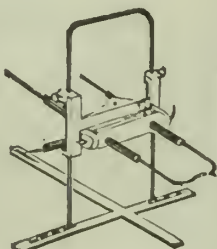


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LONG,
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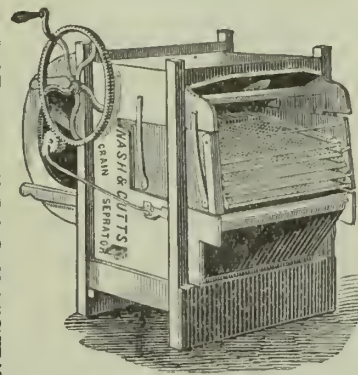
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THREE SIZES—Warranted to Clean from
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These Mills and Pumps are
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double bearings for the crank
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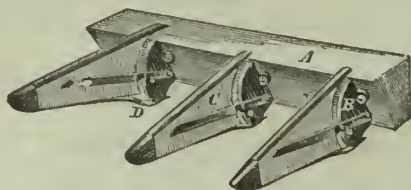
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Adjustable Grain Lifter for Headers.

All farmers who wish to save grain without waste in
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Parties can save additional the cost of a set in one day's
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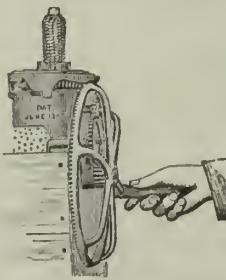
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is not above its cap-
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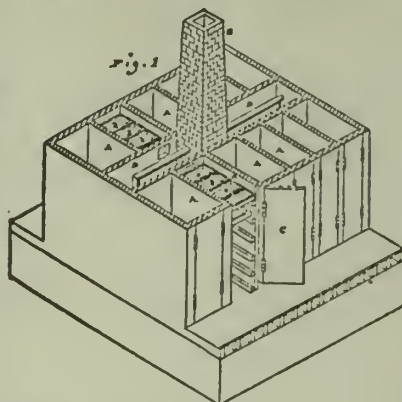
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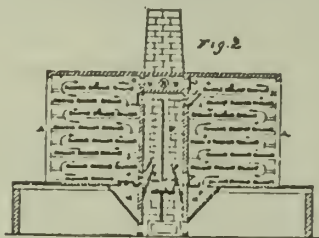
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FRUIT PITTING MACHINE.

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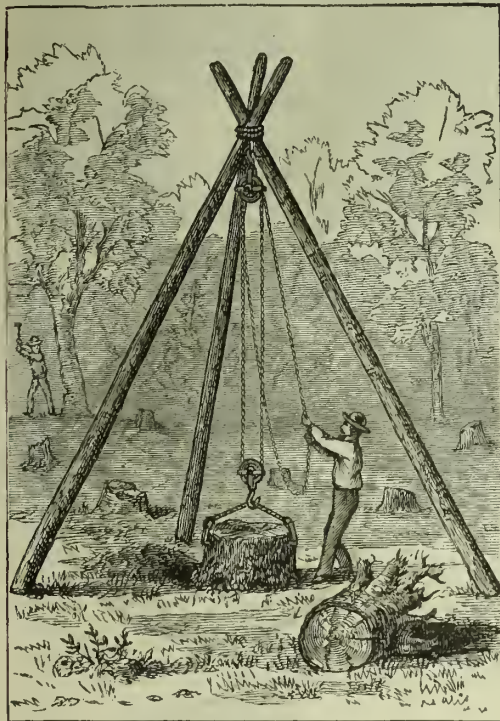
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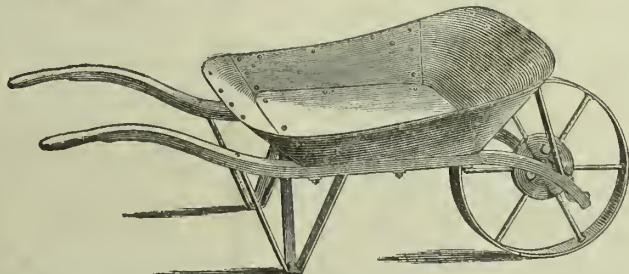
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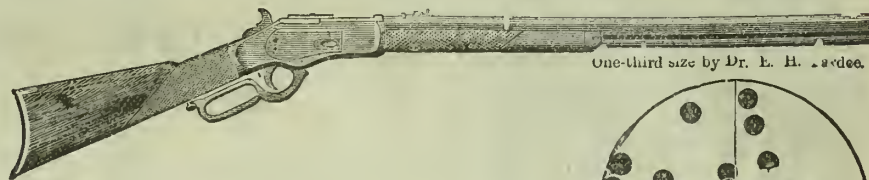
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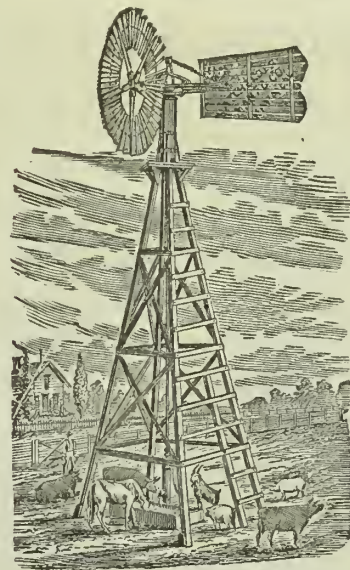
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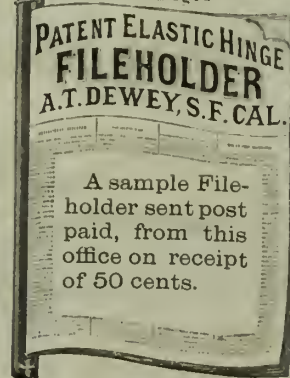
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Fig. 1



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PACIFIC RURAL PRESS

Volume XVI.]

SAN FRANCISCO, SATURDAY, JULY 27, 1878.

Number 4.

The Flat Peach of China.

We were shown the other day some specimens of the "Peen-to," or flat peach of China, which had been sent to Mr. R. J. Trumbull by Mrs. Longstreet, of Los Angeles. The late Mr. Longstreet secured some trees from Australia some time ago, and when they came into bearing, was so much pleased with the fruit that he at once budded the Peen-to largely upon native seedlings. Mrs. Longstreet finds that the fruit has ripened much later than usual this year, in keeping with the generally backward season. In ordinary seasons, she thinks the fruit may be counted on in May in Los Angeles. The fruit is a peculiar one in shape. In fact we think its shape is much against it. It is very flat and irregular. Obviously, so far as the fruit departs from the full, spherical form common to the peach of Persian origin, it loses flesh and gains skin. This is, of course, not a valuable exchange.

glands reniform; maturity, May 24th to end of June, in Florida.

The original tree originated by P. J. Berckmans, Augusta, Ga., from pits received from Australia in 1869; but from its habit of blooming in January, is unsuited to open air culture in the middle section of the State. Trees sent to Florida have fruited abundantly and prove to be adapted to the sub-tropical zone, where varieties of the Persian or common strain, as cultivated throughout the United States, are worthless. In Gainesville, Florida, this variety ripened May 24th, 1877, the growing season being 30 days later than ever known before. The supposition is that its maturity there would, in ordinary seasons, be about May 1st. In Pensacola, a three-year-old tree produced 1,200 specimens.

A RARE SPECIMEN OF FOSSIL IVORY.—In the cabinet of Messrs. Smith & Patterson, of Sutter creek, is to be seen a specimen of ivory, that so far has proved to be a paleontological puzzle. It was found in the town of Sutter creek by parties sinking a shaft for water, at the depth

Ostrich Farming.

EDITORS PRESS:—My time is engaged in making a desert farm. One edge is on the river and I have a semi-circle of 50 miles, desert. Where can I get ostrich eggs that will hatch under a goose? Can you tell us some about the means and methods employed in ostrich farming, etc.?—CHARLES D. POSTON, Florence, Arizona.

Ostrich farming has come into prominence of late, through the successful practice in South Africa. It was agitated as an industry fitted for our coast about two years ago, but we never heard that the suggestion was acted upon. If it has, and any one has the birds, we should like to know it.

In order to answer the queries of our correspondent and to give our readers generally information concerning what is certainly a unique and interesting industry, we shall present some engravings showing the mode of ostrich growing in South Africa. The engravings are from plates which recently appeared in one of the English illustrated papers, being made in the first place from photographs taken on the spot.

young and old, were worth about \$150 apiece. Each bird fit for plucking gives two crops of feathers a year, and produces on the average feathers to the value of \$75 per annum. The creatures feed themselves, unless when sick or young, and live upon the various bushes and grasses of the land. The farm is divided out into paddocks, and, with those which are breeding, one cock with two hens occupies each paddock. The young birds—for they do not breed till they are three years old—or those which are not paired, run in flocks of 30 to 40 each.

"Ostrich farming without the use of an incubator can never produce great results. The birds injure their feathers by sitting, and at every hatching lose two months. There is, too, great uncertainty as to the number of young birds which will be produced, and much danger as to the fate of the young bird when hatched.

"The incubator shown in the engraving on this page is a low, ugly piece of deal furniture, standing on four legs, perhaps eight or nine feet long. At each end there are two drawers, in which the eggs are laid with a certain appara-



CORRALLING THE BIRDS ON THE OSTRICH FARM OF MR. A. DOUGLASS, SOUTH AFRICA.

Its unhandsome appearance, too, is not a good mark. If, on the other hand, this fruit can show qualities in flavor, in earliness of ripening or in adaptation to some of the heated parts of the State, where the common peaches do not reach perfection, then it may prove a very desirable addition to our fruit list. These things remain to be proved, and we hope the trees started by Mr. Longstreet may be scattered here and there, so the qualities of the tree and the fruit may be brought out.

We notice that the Peen-to was brought before the last meeting of the American Pomological Society, through some specimens grown in Florida. The fruit was carried to Florida from the same points whence it came to California, viz., from Australia. The following description and notes concerning the growth of the fruit in the Southern States are taken from the last report of the Society:

Peen-to, or Flat Peach of China.—Size, two inches in diameter. Shape, irregularly round, very much flattened; one inch and a half through on one side, and one inch on the other; suture or furrow very deep, extending from the stem around thinnest side to the calyx; calycinal cavity narrow and deep; skin, greenish yellow, washed and delicately penciled carmine, peels readily at maturity; flesh very fine grained, juicy and dissolving, with a delicate almond aroma; quality best; cling-stone; stone very flat, five-eighths inch thick; flowers large,

of about 30 feet from the surface, embedded in a strata of blue mud, which here rests on a bedrock of talcose schist. The specimen is about four inches in length, three-fourths of an inch in width at the socket-end or base, tapering gradually to a point at the other extremity. The shaft is prismatic or thickest in the center, like a double-edged bowie knife and slightly curved, the edges serrated, the teeth about the depth of a joiner's tenon-saw. The inclination of the teeth on one edge is towards the point, on the others the reverse. The joint appears to be of the kind known as ginglymoid, the articulation of the diarthrodial kind, which only admits of motion in two directions like a hinge—as the knee-joint or elbow-joint. It is evidently a powerful natural weapon, offensive and defensive, or both belonging to some of the extinct fauna of this coast, which lived and had its day away back in the mazy, far-off periods of the pliocene or post-tertiary, geologic epochs more easily written than comprehended. Will some modern Agassiz or comparative anatomist or paleontologist tell us what it is?

COTTON IN MERCED COUNTY.—Horace Buckley informs us that the cotton prospect in Merced county is good this year. There are about 350 acres in cotton. We hope he will inform us fully about it when the crop is gathered. The hop prospect is also good; 36 acres will yield about the same as last year, 200 bales,

The first man to go into ostrich culture on a large scale was Mr. A. Douglass, of Grahams-town, South Africa. Ten years ago Mr. Douglass obtained three wild birds, and afterwards eight more. As soon as he found they would lay in confinement, he began his experiments in artificial hatching. This attempt met with but little success for three years, till he invented the patent incubator, the success of which has become renowned. By its means he has increased the 11 birds to 900, and these and others, becoming dispersed throughout the colony, have made ostrich farming, next to wool and diamonds, the most important industry of South Africa.

Mr. Anthony Trollope's recently published book on "South Africa" contains the following description: "Mr. Douglass is, among the ostrich farmers of the colony, about the most successful, and the first who did the work on a large scale. He is the patentee for an egg-hatching machine or incubator, which is now in use among many of the feather growers of the district. Mr. Douglass occupies about 1,200 acres of rough ground, formerly devoted to sheep farming. The country around was all used not long since as sheep walks, but seems to have so much deteriorated by changes in the grasses as to be no longer profitable for that purpose. But it will feed ostriches.

"At this establishment I found about 300 of those birds, which, taking them all round,

tus of flannel; and these drawers, by means of screws beneath them, are raised and lowered to the extent of two or three inches. The drawer is lowered when it is pulled out, and is capable of receiving 15 eggs. Over the drawers and along the top of the whole machine there is a tank filled with hot water, and the drawer, when closed, is screwed up so as to bring the side of the egg in contact with the bottom of the tank. Hence comes the necessary warmth. Below the machine and in the center of it a lamp or lamps are placed, which maintain the heat that is required. The eggs lie in the drawer for six weeks, and then the bird is brought out.

"All this is simple enough, and yet the work of hatching is most complicated, and requires not only care, but a capacity of tracing results which is not given to all men. The ostrich turns her egg frequently, so that each side of it may receive due attention. The ostrich farmer must therefore turn his eggs. This he does about three times a day. A certain amount of moisture is required, as in nature moisture exudes from the sitting bird. The heat must be moderated according to circumstances, or the yolk becomes glue and the young bird is choked. Nature has to be followed most minutely, and must be observed and understood before it can be followed. And when the time for birth

Continued on page 57.



CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Amador County.—No. 1.

EDITORS PRESS:—This county lies easterly from San Francisco about 140 miles, and is bounded by the counties of El Dorado, Sacramento, San Joaquin, Calaveras and Alpine, and the State of Nevada. The greater portion of the county is what is known as foothill land, lying along the western slope of the Sierras. There is but little valley land, proper; and the mountain land is but a narrow strip, or paucity, extending between the headwaters of the Cosumnes river on the north and the Mokelumne river on the south, to the summit of the Sierras, or to the western line of the State of Nevada. The county was settled in 1849, at Jackson, the present county seat, one of the first settlers being the present popular landlord of the principal hotel at that place—Mr. E. Evans.

The placer mines were fabulously rich, the yield in and about the town of Jackson being equal to any other locality in California. The mineral wealth, and its comparatively easy acquisition, soon concentrated the miners in great numbers at this point, so that the village of Jackson, now numbering about 1,200 souls, contained during the years of '49 to '55 a population counted by as many thousands. But, after the rich placers, easily found and worked, were exhausted, the great mass of the people emigrated in search of other gold fields, leaving this county with its great quartz lodes and its deep gravel beds, its copper mines, its coal measures and its large beds of almost pure silicon or kaoline, equal to that used in France for manufacturing the celebrated French porcelain ware; its beds of argyll or potters clay, equal in quality to any in use in the world; its inexhaustible marble quarries, and last, though most important to the farmer, stock raiser and fruit grower, its fine alluvium—undeveloped or not even prospected or supposed to exist, and up to this time but partially developed.

The county is well watered. There are a number of respectable sized streams passing through it, of which the most important are the Cosumnes with its several branches on the north, Dry creek, Slate creek, Sutter creek, Amador creek, Rancherie, Jackson creek (three branches), and the Mokelumne river on the south. There are also a number of canals or ditches conveying water along the summits of the ridges, which is utilized for mining and agricultural purposes, and to propel the machinery of the numerous quartz mills and saw mills now running. This water could also be utilized for all kinds of manufacturing purposes. Of the most important of these ditches might be mentioned the Amador canal, about 60 miles in length, taking its main supply of water from the North fork of the Mokelumne and carrying about 2,000 inches; also 130 miles of ditches in the vicinity of Volcano and Pine Grove, owned by Charles McLaughlin, of San Francisco—supplying the miners and mills in that part of the county, and irrigating a large area of agricultural land. There is also the Parrington ditch, which takes water from the Middle fork of the Cosumnes and supplies it to the miners and farmers in the neighborhood of Fiddletown—now called Oleta. Another large canal is taken from the South fork of the Cosumnes, and supplies the power to run the Phenix quartz mill—80 stamps—at Plymouth, also furnishes water to the farmers and fruit growers along its entire length.

This county, considering its many resources, is very sparsely populated, which may be accounted for to some extent from the fact that it is not upon the line of any of the great railroads passing through the State, and has only within the last year been intersected by railroad by the construction of a 26-mile branch from the Central Pacific, starting at the village of Galt, in Sacramento county, and terminating in Ione valley, Amador county, at the village of Ione City.

Ione Valley.

This valley, watered by Sutter and Dry creeks, and Jackson valley watered by Jackson creek, a few miles to the east of the first mentioned, contains the best agricultural districts in the county, and not surpassed by any part of the State in the raising of wheat, corn, barley or fruit. The crops this year are exceptionally good, especially the wheat, which did not suffer as in many other counties of the State by either rust, smut or cheat.

Among the many farms and farmers visited by your correspondent, and without intending to make invidious distinction, but for the want of space, the names of a few only can be mentioned. In Ione valley the "Q" ranch, owned by Dr. O. N. Morse, is perhaps the model farm of the county. It contains several hundred acres of rich bottom land, lying on both sides of Dry creek, all well fenced. It has good buildings, surrounded by immense ornamental, shade and fruit trees, and embowered and festooned by climbing roses, Australian bell flowers, Passion vines. The site is perfumed by

fragrant acacias, heilotropes and the magnificent magnolia grandiflora, not to mention the multitude of exotics and floral productions in garden and conservatory, filling the atmosphere with their fragrance and the eye of the beholder with delight. The Doctor has 28 acres of orchard, containing all the fruits peculiar to our climate, in full bearing. He will make about 30 tons of dried fruit this year, beside what will be marketed green. Wheat, corn, barley, oats, hops and alfalfa are also grown to perfection.

In the same neighborhood are the farms of C. Dosh, J. Farnsworth, W. W. Carlisle, J. W. Violet and many others, all models of neatness and good order, showing the hardiwork of the industrious and educated husbandman, in their well-filled grain fields, fruit-laden orchards, and pastures of sleek cattle and fat horses.

In Jackson valley, among the many farms that evidence superior cultivation might be mentioned, without prejudice, those owned by W. H. Prouty, R. S. Swift, J. C. Hamrick, I. B. Gregory, Stephen Kidd and C. S. Black. The yield of the cereals this year is in excess of any former year within the memory of that traditional oldest inhabitant. The hay crop is equally large. Alfalfa yields as high as 13 tons per acre at four cuttings.

The Mokelumne river, a few miles south of the last mentioned valley, passes through a very rich flood valley. The terraces or different water lines on which are found coprolites from the seal, are well marked, and can be traced for miles on both sides of the valley many feet above the present channel of the river. The valley is not wide, but the soil is very rich, containing a large percentage of probably shell marl, and although the ground is high, large fields of the largest and finest watermelons are raised for the San Francisco market, without irrigation.

The village of Ione City, at the terminus of the Amador railroad, is a thriving little town. They claim a population of about 700, of which 150 are children. There is a good schoolhouse, three churches, two hotels, a printing office, in which is published a neat little weekly called the *Ione Valley Times*; a number of general stores, two drug stores, the usual variety of mechanics, also a flouring mill owned by Mr. F. C. Hall. This is the only flouring mill in the county. It turns out 200 barrels of flour per day, besides grinding from 15 to 25 tons of feed in the same time. Mr. Hall buys and works up in his mill about \$200,000 worth of grain every year.

Ione City, June 20th, 1878.

Irrigating Canals of Tulare County.

Principles Taught by Experience.

EDITORS PRESS:—The fact that, by the efforts of the farmers of this Mussel Slough and Cross Creek country northeast of Tulare lake, some 35,000 acres are more or less irrigated this year, makes this one of the most interesting and useful parts of the State to study the means and results of irrigation. Out of about 200,000 acres adapted to irrigation between Tulare lake and the Central Pacific railroad, and King's river and Cross creek—the lower part of Kaweah river—it is estimated that at least 160,000 can be supplied eventually with enough water from the

Seven Main Ditches Already Made.

And to be extended. A project is now being discussed for furnishing the remaining 40,000 acres by a canal to be taken out much higher up King's river than any yet constructed from its south bank.

The seven ditches already completed, in whole or part, comprise

Nearly 200 Miles

Of made canals or natural channels, varying in width from about 20 to 100 feet, at a total cost of about \$300,000, or an average of some \$1,500 per mile. Two of these—the "Settlers" and "Lakeside"—are taken from the north side of Cross creek; the former at a point two miles east of the crossing of main railroad line of Central Pacific, about 20 miles long, cost some \$30,000; the latter, eight miles lower down, length some 30 miles, cost about \$50,000. The remaining five are from south bank of King's river, as follows: 1. People's ditch, two miles below railroad crossing, length 45 miles, cost about \$100,000; 2. Mussel Slough ditch, five miles lower down and about seven miles above Kingston, length—including natural channels utilized—60 miles, actual cost in cash, and labor paid in stock, \$25,000; 3. Last Chance, five miles farther down the river and about two miles above Kingston, 20 miles long, cost about \$60,000; 4. Lower King's River ditch, three miles below Kingston, length 13 miles, cost \$28,000; 5. The Rhodes ditch, five miles lower down, length 10 miles, cost \$10,000. The latter, named from Mr. Daniel Rhodes, one of the early settlers here, is the oldest, having been in use some 10 or 12 years, all the others dating back only from two to four years. The usual water rate of these ditches, when water is charged for, is \$1.50 an acre per year.

The Bravery, Energy, and Perseverance With which the people of this district have grappled with the problem of irrigation and have in a few years accomplished so much work, with scarcely any means but their teams, their labor, and prospective value of their lands, are beyond all praise, and deserve the sympathy

and encouragement of every one in this State.

That these lands are not worth now but \$5 per acre, or less for grazing lands alone, is due almost entirely to their own efforts, and it would be hard and unjust, indeed, if a fostering Government, to which they and their children have a right to look for protection, should, under any pretext, allow them to be forced to pay over again for their toil and their ditches; as would be the case, were they obliged at any time to pay much more than the regular Government price for their lands.

We trust, that for the good name of American liberty and law, they will be dealt with fairly and liberally in the final settlement of their conflicting claims with the railroad.

For the facts and figures here given about these valuable ditches, which have already made a sure and attractive farming country out of one, which a few years ago was like all of San Joaquin valley—without irrigation—a very uncertain one, I am indebted to John S. Urton, Daniel Spangler, Maj. T. J. McQuiddy, C. W. Robinson, George Cotton, E. A. Manning, and others, who, with the co-operation of their neighbors, have done so much to aid in accomplishing these results, which every visitor to this favored region now recognizes.

Many Valuable Lessons

Have been taught by their varied experience, and those about to begin like works can greatly profit by these lessons, if they will.

But without any prejudice, with due respect to differences of opinion, wishing to do no injustice and with reference only to results, I must confess that certain original principles carried out successfully, at very small expense, and contrary in general to previously taught theories about ditching to irrigate, teach some of the most practical and valuable lessons I have been able to find in any part of California. I allude to the plan and management of the Mussel Slough ditch, by its Superintendent, E. A. Manning. Without space here to discuss these principles at any length, I will merely give a summary of them. Under his peculiar management, they have by common acknowledgment greatly reduced the expense of getting water upon land, where the surroundings are favorable. His main ditch of about 60 miles, even when an additional cut increasing the depth of canal near the head-gate about three feet is made, will have cost in actual expenditure, altogether—money and stock—about \$500 a mile on an average.

These Original Principles

Are as follows:

1. No dam across the river, grade of canal at head-gate being sunk a foot below the river bed.
2. Use of nature's water-ways.
3. Use of water itself as an excavator in places. (This is an application on a small scale of Captain Eads' plan for improving the channel of the Mississippi.)
4. Taking all dirt for levees out of ditch—never, if possible, from outside.
5. Running ditches in straight lines as much as possible, changing direction by angles rather than curves. Small ditches for sections, quarters, 80's and 40's run almost exclusively on north, south, east and west lines.
6. Fall of at least two or three feet to the mile in all the largest ditches.
7. Entirely new, strong, simple, and effective plan for head-gates and regulators, costing on an average from \$700 to \$1,000 each. Smaller ones for side ditches \$5 to \$15 each. The large ones answer for bridges and form fine water-powers.
8. Peculiar form and mode of making bottoms and levees of main canals. Middle scooped out like inverted arch, broad apron on each side within levees. Levees with very broad bases, and gradual slope to sides. This, and using natural water-ways almost obviates breaks and repairs.
9. Paying liberal wages to farmers for work of selves and teams in stock, and agreeing to take the stock, dollar for dollar, afterwards in payment of water-rates. No assessment as yet on the stock and none likely, though the company was incorporated three years ago this month, and work was begun two years ago last November, 60 miles of main ditch being now under control, to say nothing of many side ditches.
10. No charge whatever as yet for use of water, though the ditch is irrigating some 10,000 acres, more or less. Charge, whenever made, to be only \$100 per 160 acres per year, or at the rate of 62½ cents an acre, no matter how much water may be used. Such are the fundamental principles, in brief, by which

Great Economy and Efficiency

Have been secured, in spite of many discouragements while bringing this important experiment in ditching to its present state of completion. So new in several respects are many of these features, that some still doubt the final success of the undertaking. The writer of this sketch does not wonder at all at the doubts thus entertained, because of the really original character of some of this work, but having examined it carefully in all its details and learned the principles and experience on which the entire system, here first tried, is based, he is satisfied it will all eventually be made to work thoroughly well. And, more than this, from my acquaintance with other parts of San Joaquin valley, its streams and numerous dry channels, I am entirely satisfied that exactly

The Same Principles can be Applied,

With entire success and great saving of expense,

by combined action among the farmers of Fresno, Merced and Stanislaus counties, to bring the much needed water from Tulare lake, the Joaquin, Merced, Tuolumne and Stanislaus rivers, if they will only unite and work cordially together, and not be like a "rope of sand." From the earnest hope that these principles of economy and success in irrigating may be more fully developed and understood, and may soon be applied elsewhere to aid in redeeming the farms of many with whom I, for one, have suffered more than tongue can tell, for the want of water to irrigate our parched lands, I have been especially careful to try to understand and record accurately the lessons here taught. To me they can no longer be of any benefit, except as I may hope to secure the good of others in future by making them known, through your columns and elsewhere. By the real knowledge being acquired of the art of irrigation here and in other parts of California, may the thousands of farmers and their families who will remain in its fertile, charming valleys, "live and learn," and prosper, as a return for their trials, hardships and disappointments in the past. For California, water is indeed its wealth.

Since the above was written, I learn by conversation with Mr. Manning, that he believes water can be brought out of the Tuolumne or Stanislaus as far as Modesto, for an actual outlay of \$10,000 in money and \$40,000 in labor, that is, \$50,000 in all, by applying the above principles. His estimate for preliminary surveys is \$200. He is so confident of this from his experience here and acquaintance with that country, that he would be willing to guarantee the same under his own management. He also advocates the tapping of both the Tuolumne and Stanislaus, and uniting their waters, to insure a more unailing supply. It may be well to heed this. It is at least good evidence, that the \$500,000 promised for the Modesto district and the \$2,000,000 for the West Side, will be ample for their purposes, with good management.

J. W. A. WRIGHT.

Lemore, July 12th.

Wheat and Chess.

EDITORS PRESS:—Allow me to further formulate the process to determine whether or not wheat will turn to chess. I find no fault with Prof. Hilgard's formula; as far as it goes, it is perfectly fair and correct, and shows that earnest desire for truth that characterizes the true scientist; and all I wish to add to it is minute instructions as to how to produce the seed wheat to be planted in the testing boxes. Let this seed wheat be obtained as follows:

Next spring when your wheat is just beginning to head out, select a bunch out by itself, or better, sow by itself a few grains of wheat with a handful of cheat or darnel seed; then when this little lot, so isolated from other wheat, begins to head out (it should be of some loose chaff variety, say the Sherman), take a pair of fine tweezers and needle and carefully opening the chaff remove every particle of pollen from each and every kernel of every head in the whole lot; do it carefully, so as to injure the grain as little as possible. By pollen, I mean the blossom or "dust of the wheat" that blows from each head when the wheat is in bloom, the "father dust," as one author beautifully calls it. Then take your heads of cheat from which the pollen is beginning to fly, and place these in contact with the wheat heads whose pollen has been removed. Keep an abundant supply of cheat pollen in contact with these wheat heads for a week at least, all the time protecting them by netting or gauze from receiving the pollen of any wheat that otherwise might be borne to them by winds or insects. The wheat produced from these heads will look like any other wheat, though it would be really hybrid. Plant this seed as directed by Prof. Hilgard, and if you find that by excess of cold and wet, favorable conditions for cheat but unfavorable for wheat, it produces cheat, you will have established, simply, that wheat and cheat, away back in the past eternity, had a common parentage; and that cheat, being the more vigorous, and near in all respects to the parent type, will reproduce itself in form and character in its hybrids. The so-called change from wheat to cheat being no violation of nature's law of everything producing "after its kind," but only producing a progeny resembling the more vigorous parent of two of the same kind, though of widely different appearances.

But somebody asks: "Are these hybrid grains going to produce wheat under favorable conditions for wheat growth, and cheat, if otherwise?" I answer, I do not think so. Nature unassisted may hybridize one wheat kernel in a thousand, and that kernel so hybridized will always produce cheat, but if the conditions be favorable for the perfect growth of the nine hundred and ninety-nine of wheat-producing kernels, the single chess-producing kernel will make a very small show in the crop; but if, on the contrary, the cold and wet rot all but the one partaking of the nature of chess and conduce to the bountiful growth and yield of that one, the farmer concludes that what of his wheat has not rotted has turned to cheat, and he's right about it.

The above is only a matter of belief with me. I have never experimented with cereals in any manner, except to try to obtain and raise the best varieties—but in my experiments with fruit

seeds, I have had a parallel experience. This letter is long enough, however, and words, opinions and arguments are not needed, but careful, honest experiments are now in order.
W. A. SANDERS.

Kingsburg, Cal.

Another Suggestion.

EDITORS PRESS:—As I am a constant reader of your valuable paper, I have been very much interested in the arguments, *pro* and *con*, in regard to wheat being transformed into chess. I do not wish to lock horns with Prof. Hilgard in argument in regard to this matter or anything pertaining to science. I agree with the Professor that it is quite unnecessary to argue about opinions; any one can test the matter for himself; but I do not think Prof. Hilgard has hit upon the most feasible way to test the matter. My theory in regard to plants producing after their kind depends in a great measure upon a sufficient nourishment from its parent, and will degenerate in proportion to the lack of nourishment in that respect. Hence, if wheat is ever transformed into chess or anything else, it is done by robbing the plant, while quite young, of its parent seed. Hence anyone can test this vexed question by planting a certain number of kernels in any good soil for wheat, then rob the plant as young as possible and not killing the stock; then transplant, water and nurse well, and you will have a nice, dark green stalk, and if it does not prove to be chess, it will not be wheat. As you transplant, you will of course know whether it is your wheat or some other person's cheat.
ANDERSON BENSON.

Kelseyville, Cal.

Honey Fruit, Poor Raisins.

EDITORS PRESS:—The beemen were jubilant in the early spring at the prospect of immense crops, but the cold foggy weather of April and May rather dampened their ardor. The yield will be a fair one, but not nearly up to expectation. In San Diego county, I am informed, that they will probably realize 400,000, against 2,500,000 pounds in 1876. A gentleman from there reports that where in previous years he took out 100 cases up to a certain date, he had not taken out 30 this season. In Los Angeles, Ventura, Santa Barbara and San Bernardino counties "extracted honey" is almost exclusively made, so that "comb honey" will be in limited supply this year, and will no doubt bring better prices after a time.

Wheat and barley crops has been a failure in this section. The former an entire loss; the latter about half a crop. Small fruits are abundant. At present we revel in blackberries. Peaches are ripening and we shall have an average crop. The lady bugs seem to have monopolized the apricots.

The grape vines are loaded down, and in due time we shall gather clusters equal to those of "Eschol," and manufacture raisins as good as Malaga can boast of. Just here I wish to say, that a few weeks ago, in the city of Cincinnati, I called upon a large house which deals in California canned goods, raisins, etc. They showed me their raisins, and they were enough to ruin the reputation of our State as a raisin producer. They were nothing more than dried grapes of a very inferior variety and packed in a very indifferent manner. I would not be willing to pay over three cents a pound for them, and the dealers assured me that they were a fair sample of the California raisin shipped to them. They had great difficulty in getting ten cents a pound for them there, and they agreed with me that it was much more than they were worth. Why can't our producers try to do things right? Get the best kind of grape, cure it properly, pack with care and establish a reputation for a number one article. This being the case the Eastern merchants will not send to Malaga or other Mediterranean ports, but will prefer the home article.
D. W. McLEOD.

Riverside, July 12th, 1878.

HORTICULTURE.

Early Wilson Blackberries.

EDITORS PRESS:—I send you a specimen of the Early Wilson blackberry, grown in the red and of our plains, showing what can be perfected by thorough cultivation and irrigation. These were grown on land that has been said was not worth the cultivating. The fruit is from last year's root set out in the fall, grown by turning the tip branch down, so in planting the root tip the eyes are reversed, branch downward, trailing on the ground. From one of these branches this stem is clipped. The nature of the vine is low and should be kept nipped off when two feet high, so as to allow the branches of the side shoots to grow low. These again after 15 inches growth should be topped off by the fingers, keeping the main stem upright with the side hanging low near the surface. The result of high trimmings is small berries, as the sap is not sufficiently strong to reach the tips. Especially in our warm climate it dies out before reaching its length, and lessens the strength of the stem. Therefore low trimming is absolutely necessary to gather good fruit. Also as it develops the growth, the branches become thickly shaded and being near the surface

where the moisture rises, it keeps a more even temperature. It is the same as with a grape, the lower it lays near the surface the larger it will develop and expand.

The stems also retain a fuller flow of sap, causing a larger amount to flow through all portions of the vine and thus developing the fruit on the vine.

Vines in a warm climate should be set out closer for this very reason; and in rows, say three feet between the plants, and leaving a space of five feet between the rows to cultivate.

The Early Wilson berry has another advantage over the old variety, the Lawton, that is the core is smaller and more pulpy. It is also sweeter, taking less sugar. The only advantage the Lawton has is it yields heavier, but the Early Wilson gains in price, where it loses in bulk, as it ripens early has every advantage over all competitors, and is gone when the Lawton just comes in. Also it ripens mostly at one time; not lasting over three weeks.

In sending these notes I have no ax to grind. I am not in the nursery business, therefore have no plants to sell. I write merely to let the public know what can be raised and to give information gained from my experience.
GEO. RICH.

Sacramento, Cal.

[The berries received were exceedingly fine, being 1½ inches long and a plump inch in diameter. They were very small cored, as our correspondent notes and deliciously sweet. We are glad to see such success with the "small fruits."—EDITORS PRESS.]

Blackberries at Petaluma.

The Petaluma *Argus* has the following review of the blackberry interest in that vicinity: Petaluma is noted far and wide for the excellent quality and large quantity of blackberries it produces. On Wednesday two *Argus* men accepted an invitation from O. F. Westover to visit his blackberry grounds, situated two miles southwest of town. We have not often passed a more pleasant hour among our fruit-growers, and on their grounds, than on this occasion. Mr. Westover has about 10 acres planted with blackberries on gently sloping hillsides, and separated in about equal divisions by a ravine. A stroll through the grounds is certainly a very interesting pastime. The hushies are loaded with fruit ranging in size from the dimensions of a pea to the large and mature berry. The soil is a light, sandy loam, and the bushes stand eight feet apart one way and ten the other. They are planted in March or April, and the next year they produce about half a crop. The third year the stalks die, new ones having sprouted from the roots, which in turn live two years, and so on. The time for pruning and clearing away the dead stalks is late in the winter. The date of commencement of the ripening of berries in this vicinity is usually about the 25th of June, but this year it was some two weeks later. The last of the crop ripens in the last days of August. An active boy, or Chinaman, will pick, on an average, 100 pounds of berries a day, at a cost to the producer of about one cent per pound. The cost of transportation to San Francisco, whence a large portion of the berries produced hereabouts are sent, together with commissions to middle men, is also about one cent per pound. The present price of the fruit in the metropolis is four and a half to five cents per pound, leaving a margin of two and a half to three cents for expenses of cultivation, interest on outlay, etc. The berries raised here are grown without irrigation, to which fact their superior flavor is attributed. The principal varieties cultivated about Petaluma are the Lawton and Dorchester.

HEALTHFULNESS OF FRUIT.—Dr. B. F. Dunkley has made public some interesting facts derived from his own experience in regard to the healthfulness of fruit. When he first went to Dunksburg, Mo., 30 years ago, no orchards were there, and few vegetables were raised. The diet of the people consisted of corn bread, bacon and a little black coffee, without sugar or cream. Inflammatory disorders, especially such as relate to the lungs, brain, bowels and heart, prevailed in the winter, and were often attended with fatal results. Malignant dysentery, the pest of armies shut off from fruit, afflicted many of the inhabitants in the summer and fall, and in the spring it was not uncommon for whole families to be sick with scurvy, the disease so fatal to sailors on long voyages before canning fruit was discovered. Dr. Dunkley told his scurvy-stricken patients, to their great surprise, that their blood needed no medicine other than vegetable acids, and he ordered them to eat oranges, lemons and sheep sorrels. Now fruit and garden vegetables are abundant in that locality, and the diseases are not of so malignant a type, and yield much more readily to treatment. When the orchards first began to bear, Dr. Dunkley noticed that those children whose fathers had planted apple trees plentifully of the fruit, both green and ripe, and enjoyed most excellent health, while children living where no apple trees grew, were dying of flux.

A GYPSUM FIND.—A gypsum deposit has been discovered, says a Los Angeles paper, ten miles from here, and Mr. Bryd brought in a wagon load a day or two since, and it will be tested on some of our alkali lands. Dr. Wolfe has a mill for grinding the gypsum. Mr. Sessler, of this place, imported a quantity of gypsum from San Francisco, a short time since, for use on his lands, and we understand the experiment has been highly satisfactory.

THE STOCK YARD.

Native Grasses of Australia and New Zealand.

EDITORS PRESS:—In the PACIFIC RURAL PRESS for April 6th, 1878, you express a desire that I should inform your readers as to the habits and growth, the soils on which they flourish, and the degree of moisture required, of the Great Quagga, Kangaroo, and other grasses. Before doing this I should wish to point out that these grasses are not indigenous grasses of New Zealand, but grasses that I obtained from Australia (of which place they are natives) and distributed them in New Zealand.

For the last 20 years I have been obtaining grass seeds and roots from all persons and parts of the world that I could get them from, and during this time I have grown and experimented with many hundreds of genera and species, with a view of introducing to the pastures and fields of this new country all such as would increase the winter and summer feed of the live stock pastured thereon.

Among the grasses I have grown, tried, tested, analyzed, and fed stock upon, are those you named. I will, therefore, briefly give you the results of my experience of them, as well as what is said of them in their own country by those competent to judge of their merits. To avoid mistakes I will put the botanical name as well as the one they are commonly called.

The Quagga grass (*Andropogon montanus*) is a strong, coarse grass of a dry quality which grows on dry lands where better grasses will not thrive, but there is a smaller variety of this species which is a much better grass, grows on alluvial lands, and stock eat this more readily and thrive upon it better than upon the larger kind, but neither of these are so good as some I shall hereafter name. This grass is a native of Northeastern Australia.

The Kangaroo grass (*Anthistria Australis*) is found in all parts of Australia; grows about three feet high, is a perennial, flowers in the middle of summer, often does not perfect its seed, and the few perfect ones do not germinate readily, which is a pity, as it is the best and most useful of the grasses that grow in the temperate parts of Australia. It is a most excellent grass if cut for hay, and the animals relish and thrive upon the hay made from it. It commences to grow in the earliest spring, keeps growing all the summer, will rapidly fatten all kinds of stock. Horses work well when fed on this alone without corn, and horned cattle grow and make beef quickly when grazing upon it, and it grows mutton and wool well, but it will not bear grazing down all the year through, or it will die out; but if it gets fair treatment, it is a very superior grass. It has proved all these qualities with me in New Zealand, and it would do well in California, as it grows in Africa, Asia, and Japan.

The Blue grass (*Andropogon annulatus*) is a very excellent pasture grass, productive and fattening in moist, warm situations; does not grow so well in places affected by drouth, but in the Queensland colony of Australia, where it is a native, it has a wide range, and is there a very good pastoral grass. It grows and perfects its seed in the autumn in New Zealand, beginning to grow vigorously in the late spring and early summer. I think this is a very good grass and would suit the California climate in warm, moist situations.

The Ratstail or Mousetail grass (*Polypogon monspeliensis*) grows in several parts of Australia; has delicate leaves, seed stems from nine to 18 inches high, is eaten and relished by stock, but its growth is too slow to be of much value. It is suitable for a mixture with other grasses.

The Blue Kangaroo grass (*Andropogon refractus*) grows in the hotter and tropical parts of Australia and is as good there as the *Anthistria Australis* is in the cooler parts of Australia. It produces a heavy crop in the summer, but grows better during the winter. It is good for hay and summer pasture.

Polly grass (*Arundinella nepalensis*) is also a native of Australia. In the hotter parts of that country, where it grows upon high, dry land, it is then a dry, coarse grass, but if growing on alluvial soil it is an abundant, rapid-growing grass, and can be cut three times during the year for hay.

There are many kinds of grasses known locally as star grasses. They are natives of New South Wales and Queensland colonies in Australia. There is one, *Chloris barbata*, which is a very valuable species; grows freely both summer and winter, in both wet and dry situations. It is a native of Queensland, but grows well in New Zealand; gives an abundance of herbage, will do to make hay, for grazing of horses, cattle or sheep, grows and fattens them quickly, and is a useful grass for mixed pasture. It flowers in the middle of summer. Once established it spreads rapidly. It is perennial.

There is another star grass taller than the preceding, *Chloris permilio*. It grows in tufts with a fine leafy bottom; likes a warm, somewhat damp situation.

Another Blue grass, by some people called and known locally as Blue Polly (*Andropogon erianthoides*). It is a native of Queensland and its neighborhood, in Australia. This is one of the very best grasses for a warm country, as it not

only grows very fast and makes abundance of feed for live stock, but it grows and fattens them quickly, being very nutritious. Better than most grasses, it will bear heavily stocking and eating off close to the ground, and will then rapidly grow up into a heavy crop of rich succulent herbage. I think it would do well in California; it spreads freely from the roots, and seeds freely.

Another so-called "blue grass," growing in some localities, is *Andropogon laniger*. It does not grow as tall as the last, but is a rapid grower, and is nutritious and fattening. It would suit your California climate.

The *Andropogon falcatus* would also be a useful introduction to grow upon high, dry, stony ridges, as it will thereon make a close, fine turf, which sheep will thrive on in the summer season. Also the *Andropogon gryllus* will grow as a pasture grass in the dry, hot summer months, when it will give a quantity of feed when other grasses would fail.

Then for your hot plains, where it could be occasionally irrigated, the *Andropogon halepensis* would be far better than the Hungarian grass, as it contains nearly double the flesh-forming and more than double the fat-forming elements of that plant. It grows so quick, strong, and succulent, that it is more like a sorghum. And this reminds me that your climate would do admirably for the sorghums, and the farmers and grazers, who grow them one year and feed their hullocks, cows and hogs upon them, would grow them every year after.

There is the *Sorghum saccharatum*, with its sweet, juicy stems and tender leaves, and enormous weight of herbage to cut all the summer through for fodder for production of milk from cows, for fattening beef and pork, and being also nutritious food for other animals. Also try *Holcus saccharatus*, another fodder plant for a warm climate. These will grow all the summer. Vetches, rape or cape barley would grow for a like purpose in the winter months.

For the sides of your rivers, swamps and damp lands, the *Andropogon muticus* would do well, as it would give a good growth of herbage and its underground stems would cause it to spread, and as it stands feeding down closely, it would not soon be killed by the animals feeding upon it.

Andropogon procerus is a fine succulent grass, which will grow along the sides of rivers and creeks. It grows rapidly, produces a heavy crop of hay, or fodder, or grass to feed off. These two latter grasses are natives of northeastern Australia.

Then *Andropogon refractus* is a fine summer grass, producing a heavy crop, but in the winter season almost ceases to grow.

There is also the splendid *Danthonia elymoides*, called in northern Australia "the true Mitchell grass," one of the best pasture grasses for a hot climate. It will stand two years drouth. Much of northern Australia would be valueless without this admirable grass. There are other *Danthonias* or Mitchell grasses in Australia, but this is the best. It grows very rapidly after the least wetting, and all stockmen are very fond of it.

Festuca Billardieri is an excellent Australian grass, good at all seasons and all stock owners value it highly. It grows well with me, both summer and winter, in New Zealand, and where stock cannot get to it I find some of the plants in seed for eight months of the year.

Holopus annulatus, another Australian grass, is good for both summer and winter feeding. The pastoralists speak very highly of it, and during my experiments with it, it has kept seeding for four months of the summer and autumn.

But I must cease writing or you will have no space for these remarks. When I look into my notes and see the hundreds of species of grasses that I have tried, and so many of which possess peculiar merits, either for summer or winter, some for wet and others for dry lands. I am tempted to write on, but for the present will finish this by stating I have selected a few of the grasses that are inhabitants of a climate like that of California, and would therefore be very suitable for introduction there. I will send seed of these to my correspondents in California, who will grow and test them, and the grasses will then be within the reach of those wishing for them.

I send with this one of the series of papers I wrote for our scientific society, and that they published for our colonists.

If you think your readers would feel interested in the subject, you are quite at liberty to print it in the RURAL PRESS. Should you wish for others, I will forward them to you, as anything I could do to assist in carrying out the objects you are so ably accomplishing by your admirable paper will afford me much pleasure.

T. M. CURL, M. D.

Manika Bush Station, Central Rangitikei, Wellington, New Zealand.

[We are under sincere obligation to our correspondent for his interesting and valuable communication. The pamphlet which he sends we shall make use of hereafter. We should also be much pleased to have him continue his notes on a subject which he has studied so long and carefully. We have no doubt at all, that we can secure valuable forage plants by trying those which are found of value under similar conditions in Australia and New Zealand. We hope those who receive seeds from Dr. Curl will give them fair trial, and report results to us as soon as the experiments warrant.—EDS. PRESS.]

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Worthy State Lecturer's Appointments.

Name of Grange.	County.	Time.
Surprise Valley	Modoc	Tuesday, July 30th
Eagleville	Modoc	Thursday, August 1st
Cedarville	Modoc	Saturday, August 3d
Northeast	Modoc	Monday, August 5th
Modoc	Modoc	Wednesday, August 7th
Davis Creek	Modoc	Saturday August 10th
Crescent City	Del Norte	Wednesday August 14th
Rivellutah	Humboldt	Saturday, August 17th
Sable Bluff	Humboldt	Monday, August 19th
Ferndale	Humboldt	Wednesday, August 22nd
Mattole	Humboldt	Friday, August 23d
Cahto	Mendocino	Tuesday, August 27th
Potter Valley	Mendocino	Thursday August 29th
Lakeport	Lake	Saturday, August 31st
Cloverdale	Sonoma	Monday, September 2d
Healdsburg	Sonoma	Tuesday, September 3d

Grange Warning Against Adulterations.

Mr. George T. Angell of the Massachusetts State Grange, has prepared the following circular, which has the sanction and approval of the grange, and has been sent by it to the local granges of Massachusetts and the State granges of the United States:

BROTHERS:—We think it our duty to caution granges against the increasing sale of poisonous articles in our markets.

Arsenic is now sold at wholesale at about five cents a pound. There has been imported into this country in a single year 2,327,742 pounds. A single pound contains a fatal dose for about 2,800 adult persons. What becomes of it? We answer, a considerable portion goes into our wall papers, figured and plain, glazed and unglazed; the cheapest as well as the more expensive. It is found in white, blue, red, yellow, green and other colors. The pale colors frequently contain more than the most brilliant. The editor of a leading Boston paper has recently stated that about 85 per cent. of all wall paper now manufactured contain arsenic, and advises his readers to abandon their use and paint their walls. The Boston *Journal of Chemistry* states that the manufacture of these papers is increasing. Arsenic is also used in tickets, paper curtains, covers of boxes, papers containing confectionery, and other papers. Arsenic and other poisons are now used in the coloring matter of ladies' dresses, gentlemen's under-clothing, socks, hat-linings, linings of boots and shoes. They are found in woollens, silks, cottons and leather. Professor Nichols, of the Massachusetts Institute of Technology, found eight grains of arsenic in each square foot of a dress. Another of our chemists found 10 grains of arsenic in a single artificial flower. A child recently died in Troy, N. Y., by taking arsenic from a veil thrown over its crib to keep off flies. The Boston *Journal of Chemistry* states that they are now putting arsenic into toilet powders used in nurseries and by ladies, it being cheaper than starch, of which they were formerly made.

It would be well also for farmers to be careful in buying new kinds of cooking utensils. It was discovered last year that "marbleized iron ware" which had come into extensive use, was, in the words of the Harvard University chemist, who analyzed it, "alive with poison;" the enamel being largely composed of oxide of lead in soluble form. We are assured that other poisonous ware is still sold. Let grangers refuse to buy new ware unless guaranteed harmless.

Many flavoring oils and syrups contain poisons. It is well to avoid them so far as possible.

Tea, coffee, cocoa and chocolate are all liable to be adulterated, and to some extent with dangerous articles. It is well to buy only of the best and most experienced dealers.

Sewing-silk and threads are made heavy with lead, and poison those who use them.

Thousands of barrels of "terra alba" or white earth, are every year mixed in various forms with our sugars and other white substances. Its use tends to produce stone, kidney complaints, and various diseases of the stomach. A large part of our cream-of-tartar used in cooking contains 50 per cent. or more of "terra alba." It is also used extensively in confectionery and various poisons are used in coloring confectionery. Mills in various parts of the country are now grinding white stone into a fine powder. It is stated that they grind at some of these mills three grades—soda grade, sugar grade and flour grade. We think it would be a paying investment for the grangers of each State to employ a competent chemist to detect and publish adulterations, and then withdraw all patronage from those who manufacture or sell such articles. We think there is quite as much need of organizations in all our States to enforce laws for the protection of public health, as there is for organizations to catch and punish horse thieves.

In conclusion we can congratulate the granges that the farmers are exempted from some of the dangers to which other classes are subject. We make our own vinegar. It is stated in the *Scientific American* that probably half the vinegar now sold in our cities is "rank poison." We make our own pickles. A Massachusetts chemist who analyzed 12 packages of pickles, put up by 12 different wholesale dealers, found copper in 10 of them. We have pure milk and genuine cream, and not the manufact-

ured material which so largely supplies our cities and populous towns. It was estimated by a medical commission of the Boston Board of Health in 1874, that nearly \$500,000 was paid in that city in that year for what purported to be but was not milk. In a similar period of time there were 487 deaths of "cholera infantum" in Suffolk county, while in the same population outside the city there were less than 100.

And lastly, we are not compelled to eat oleomargarine cheese, or any part of the 90,000,000 pounds of oleomargarine butter, which it is estimated will be made in this country this year, in which, as we are told by the Chicago *Livestock Journal*, Professor Church has found horse fat, fat from bones, and fat such as is principally used for the making of candles, and in the preparation of which, as has been recently widely published, upon what seems to be reliable authority, not sufficient heat is used to kill the parasites, which enter and breed in human bodies.

BENJAMIN P. WARE,
Master of the State Grange of Massachusetts.

Grangers' Bank of California.

The semi-annual statement of the Grangers' Bank may be found in our advertising columns. It is of interest to note the tender which the Bank makes of money on stored grain. The following circular has been issued to the stockholders of the Bank and for public information:

Dear Sir: I beg leave to inform that arrangements have just been completed by which the Grangers' Bank will be able to loan money on wheat stored in approved warehouses throughout the State, at the lowest market rate of interest, after the usual way such business is transacted. The credit is due largely to the officers of this Bank that the prejudice against loaning money upon securities in the country is gradually disappearing; and we hope our success will be both appreciated and advantageous to you if you choose to store your grain at home, and that you will patronize Grange institutions, of which you are a member, acting in common interest together. — ALBERT MONTPELLIER, Cashier and Manager, San Francisco, July 18.

The Proposed Agricultural College in Mississippi.

The Legislature of Mississippi has at last adopted measures to establish an agricultural college in that State with the money donated by Congress for the purpose. The farmers of Mississippi will now soon realize the benefits of a first-class college designed specially to promote the interests of agriculture. After the selection of a location, the most important step will be the formation of the Faculty. The President should not only be an able and experienced instructor, but he should be in thorough accord with the sentiments of the farmers, and fully identified with their interests. The name of one distinguished gentleman has been mentioned in connection with the Presidency, whose selection, we doubt not, would be cordially approved by the farmers of the State. We allude to Major J. W. A. Wright, of California. His splendid ability, his education and large experience as an instructor, in which position he displayed administrative capacity of the highest order, all fit him in an eminent degree for this important position. To the Patrons of Husbandry in Mississippi he would be especially acceptable, for no Grange leader has rendered more valuable services to their Order and to the cause of co-operation than the distinguished author of the Grange "Declaration of Purposes." The Subordinate Granges, by expressing their preference for him by resolutions, could secure his appointment. His assistance would be valuable to the Board of Trustees in their preliminary work, and they would do well to secure his services on his return to the South.—*Patron of Husbandry.*

It would please Major Wright's friends in this State to have him secure this position, for which he is so well qualified.

In Memoriam.

SACRAMENTO GRANGE, July 13th.

WHEREAS, It has been the will of our Divine Master to remove by death from our number, Bro. John Conner, a member of this Grange, thereby be it.

Resolved, That in the death of our much lamented brother the Grange has lost a noble and true patron, of whom it may be truly said, he was a true patron of husbandry, and a son of toil.

Resolved, That the Grange extend its sympathies and condolence to the wife and children of our much esteemed brother, assure them that we will hold sacred his memory, and trust that the Divine Master above has called him to that heavenly home, where there is no more toil and labor, no more trouble and sorrow, where the financial struggle of life shall no more tax his honest heart and brain, but where he shall rest in peace.

Resolved, That the Grange regrets that the isolated residents of our membership make it impossible to attend his funeral in a body, but that the members wear the usual badge of mourning.

Resolved, That a copy of these resolutions be sent to the wife of our late brother, and be copied in the minutes of the Grange, and published in *Patron* and *RURAL PRESS*. Committee: Wm. N. Haynie, Geo. Cone, Sister D. Hull.

AGRICULTURAL NOTES.

California.

COLUSA.

FIRE IN GRAIN FIELDS.—*Sun*, July 20: There have been twice as many fires in the grain fields this year as we have ever had in any one year in this State. It seems that there is occasionally a fire epidemic. Cities, grain fields and woods seem, at time, to burn with wonderful viciousness. There must be, at times, a state of the atmosphere more favorable to fires than at other times. The losses to grain fields in this State, in the last six weeks, foot up something like \$200,000. This is entirely unprecedented, and has brought out the suggestion of some legislation to compel men to reap, at the beginning of harvest, a strip around a certain number of acres, and plow the same. It is certainly very dangerous to have an unbroken grain field for miles and miles, as we sometimes have in this country. Before we commenced to raise grain we have seen the fire sweep almost the entire length of the county in a few hours. In 1854 we had a crop in on the Van Winkle place, near the foothills, about six miles west of Williams. We had a strip burned around the field. There was a strong south-east wind blowing, when we saw a fire start about 10 miles to windward. We saddled up a horse to ride round the field. It did not seem to us half an hour until the fire swept past, dividing at the field. We followed the fire as fast as the horse could go to our neighbor's—Daniel Blair—about two miles off, but when we got there he had not a stalk left standing. He had depended on the creek to protect him on one side, but it went across the same as if there had been no creek there. The early farmers on the plains always plowed two strips around their fields and burned between. Would it not be well to take some such precaution now?

EL DORADO.

EDITORS PRESS:—Our fruit crop is very abundant, Red Astrachan and Early Harvest apples were very fine. Apricots are not grown in any quantity here, but what few trees there are in the neighborhood were loaded. Peaches are just coming in. Plums I notice are turning. Blackberries are just in their prime. Our second crop of strawberries are ripening, they are larger and finer than the first, the result of irrigation. We have ten of the best varieties in our grounds. The army worms have done considerable damage in neighboring grounds, but have not as yet invaded ours.—W. C. L. DREW, El Dorado, Cal., July 22d.

HUMBOLDT.

CROPS.—*Ferndale Enterprise*, July 12: We are told that the crops on the south side of the south fork of Kel river are good. Potatoes will be abundant. Wheat is turning out excellent and will be a heavy yield to the acre. We are also told that this is about the first year that potatoes ever grew in the Garberville neighborhood. Corn is growing in luxuriant style and will be a good crop. Hogs are easily raised. Deer and all kinds of game abound.

LAKE.

SECOND CROP TOBACCO.—*See*, July 18: Mr. A. H. Poe has left in the *See* office a sample of tobacco, raised this year from stalks that bore a crop last year. This shows one of the wonders of our climate.

LOS ANGELES.

EARLY GRAPES.—*Express*, July 20: Mr. J. Burnap, who has a ranch on what is usually called "the desert," near Walters station, and of which we made mention a few days ago, exhibited in the Supervisors' room this afternoon a box of Mission grapes, raised on an Indian rancharia near his place. Practically the grapes were ripe, being uniformly sweet and pleasant to the taste, although half of them had not yet turned to the accepted Mission color. The fruit was inferior in size, but this fault was explained by the statement that the vines had received no pruning or cultivation of any kind, the roots being surrounded with a heavy growth of grass and the branches running wild. They have never received any irrigation, and do not require it, as water stands within six feet of the surface all through that section. The fact that the grapes have ripened by the middle of July, fully two months in advance of the grapes of this valley, is the strong point in their favor. With the planting of fine varieties of vines, supplemented by scientific pruning and fair cultivation, the most astonishing results might be attained, and with such advantages it ought to prove a paying enterprise.

NINETY-DAY CORN.—Mr. John Johnson, who is farming at Garden Grove, has produced this season a very successful crop of rye, and says that the grain is as large as that of the heaviest wheat. He says that a new variety of corn was introduced this year from Iowa. It is called ninety-day corn, and matures much earlier than the King Philip. The ninety-day variety, planted at the same time as the other, now has roasting ears on its stalks, while the King Philip is only beginning to put out its silk. In Iowa this corn yields 100 bushels to the acre, and it is believed it will surpass that yield here. It has one advantage over nearly all other varieties of corn, and that is, it does not throw out any suckers. This advantage will make it very popular, if it comes up in yield to the expectations of the farmers.

PETROLEUM-SULPHUR FOR SQUIRRELS.—*Her-*

ald, July 20: The following is Mr. Cottle's recipe for the extirpation of squirrels: Saturate a piece of old cotton cloth, say about a foot square, with coal oil; then sprinkle powdered sulphur over it. The cloth thus prepared must be placed in the hole, and after setting fire to it, shove some distance into the squirrel hole. The month of the hole must then be covered with clods or loose clay, so as to allow the burning rags to smoulder, after which cover up closely to prevent the smoke from escaping. Mr. Cottle assures us that he is meeting with the most gratifying success in extirpating these pests by the above mode.

MARIN.

NEW LAND FOR POTATOES.—*Journal*, July 18: As fine a patch of potatoes as we ever saw, and a great deal the best we have seen this year, is a field at Tomales. It is a piece of land that has never been broken before, but has been enriched by the seepage of a corral for many years. When the potatoes were planted, the ground was so dry that the owner had no idea they would sprout before being moistened by the spring rains. But not a drop of rain fell after that, and they showed the finest growth that potatoes have ever made on the ranch. The plants are over two feet high, very strong and bushy, and of a rich lustrous green. It will be very strange if any disease overtakes them, and if not, the owner will hereafter always select new land for potatoes, when he can. We know of other instances where the same thing has been demonstrated.

MENDOCINO.

THRESHING IN UKIAH VALLEY.—*Press*, July 20: On Thursday of last week P. Howell started his thresher, commencing with his own crop of wheat, which turned out 900 bushels. On Monday noon he finished E. F. McTure's. His machine will now be kept constantly employed until the threshing season is over. He roughly estimates the yield of this valley at 60,000 bushels. This is not to bad considering the great amount of hay that has been harvested, the unusual quantity of cheat which found its way into the wheat fields, the wet winter, etc.

MERCED.

CROPS.—*Argus*, July 20: The harvest is progressing, but grain is coming in for storage and shipment somewhat slowly, owing to the fact that all available men and teams are engaged in heading and threshing the immense crop. The yield is fully up to the expectations of the farmers, many of whom will sack from 25 to 35 bushels to the acre, making the general average larger than for many years. The season has been as propitious as could be expected and farmers are enjoying the good times so long hoped for.

MONTREY.

GIVING GRAIN THE START OF RUST.—*Democrat*: Carr Abbott says there is a preventive of rust. He claims it to be a fact, that in the case of nine acres of land irrigated from his canal last fall, before the rains set in, and then sowed in wheat, the crop proves to have escaped rust entirely, the yield being large and the berries plump and bright. The grain was, he conceives, too far advanced to be hurt when the plague attacked the crops.

SACRAMENTO.

NOTES.—**EDITORS PRESS:** The new crop of grain is making its way to market. Business centers are becoming brisk. Millers complain of too much cheat in the grain, and prices are ruling at a lower figure than they would otherwise. The increase of new residences has stimulated trade. Wholesale and retail houses are well employed. Shipments of fruit pass off weekly. General business of all kinds has an upward tendency. Property holders on the river have taken a great part of their year's income to repair and make good the loss by flood. The outlook for corn crops on the Cosumnes is good. Lands are being benefited by the sediment during last year's overflow. Egyptian corn on the plains is looking fine. Vegetables to some extent are troubled by bugs and insects. Small fruits are on the increase. Fine apples are in demand. Grapes will be ready for market this week. Fruit drying has commenced. Preparations will soon be made for a general leveeing of the district. Crops are doing well on late sown ground that was flooded. Hay is plenty and cheap.—*Geo. Rich*, Sacramento.

SAN BERNARDINO.

PROGRESS AT RIVERSIDE.—**EDITORS PRESS:** It is several months since I have seen anything in the *RURAL PRESS* from this section. I desire to say that here there is no such thing as standstill. Progress is the order of the day. "Advance" is the watchword. Since January 1st over 300 acres of land have been sold by the Riverside Land and Irrigating Company to actual settlers in farms of 10, 20 and 40 acres each. These are all being planted with orange and other fruit trees. It is estimated that over 60,000 orange trees have been planted this spring. A number of transfers have been made of real estate by private parties, and capital and enterprise are being directed thither. This year we shall have our own "Navel" and "Mediterranean-sweet" oranges, and if they prove equal to our seedlings of last year the future of Riverside is beyond a peradventure. The water supply is abundant. A break in one of the flumes hindered work for a few days, but all is now right again. New Yorkers are turning their attention to the merits of Riverside. Mrs. LeGrande Lockwood and family, Mr. Benedict and several others have already bought and are making improvements. Mr.

Grinnell is here looking for a location. Land bought in Magnolia avenue about two and a half years ago, for an average of \$35 per acre, was sold last week at \$100. The company spares neither money nor pains to make Riverside a success, and the people reap the benefits. Our climate is simply delightful—the paradise of asthmatics, and as favorable for bronchial and lung troubles as any spot upon the coast.—D. W. McLEOD, Riverside, Cal.

SAN DIEGO.

A CLAIMED DISCOVERY IN WHEAT.—Union: We had the pleasure yesterday of an interview with Mr. L. G. Stanchfield, of Ventura county, who has been making a tour of the counties of Southern California, as well as the neighboring Mexican territory of Lower California, collecting samples of the different kinds of wheat grown. This gentleman has introduced in California the new cereal, which is attracting very general attention among the farmers. It is a variety of wheat not hitherto known out of Mexico. Its special qualities are: (1) freedom from rust; (2) very large, plump grains, covered by a long hull of coarse fiber, much resembling the husk of corn; (3) extraordinary yield. Mr. Stanchfield gives the following account of the manner in which he became acquainted with the merits of this grain: While in Lower California a short time since he saw some of this wheat at a ranch about 12 miles from Santo Tomas, and brought away samples of it. The ranchero told him that about two years ago a whale ship came to Santo Tomas, on board of which was a man having somewhat less than a pound of seed wheat, which he offered to the ranchero for a dollar. The latter thought the price large for so small a quantity, but noting the large size of the grains, finally bought it for 75 cents. This year the ranchero will gather 200 pounds, although the stock has been in the field and destroyed much of the growing grain. A Mexican has informed Mr. S. that this kind of wheat is grown in the country back of Acapulco, where it was brought from a colder region; but he does not know the original home of the grain. Specimens can be seen at the warehouse of W. W. Stewart & Co.

NEW HONEY BOXES.—Letters received here last winter advised our Bee Keepers' Association to pack their honey in "small, neat, attractive cases," in order to compete with those used in the East, and recommended the use of the "Prize Case." The President of the Association sent to him by mail a sample "prize case." This was found to be unsuited to our requirements, as it needed glass, and the cost and risk of breakage would be too great. Setting his wits to work, the President, Mr. Chas. J. Fox, invented a sliding lid, placed in each side of the box, the use of which enabled the dealer to exhibit honey without taking off the lids of the boxes, even when they are piled up several tiers high. These boxes are now being made very neatly by Wetherbee & Co., of San Francisco, and sold here by R. G. Balcom, and seem to meet the wishes of producers and dealers, judging by the large number being used. We saw this evening a sample box to be sent by mail to Chicago, to show the dealers there in what a neat and attractive shape our producers can put up their honey.

SAN JOAQUIN.

WAREHOUSES ON THE WEST SIDE.—Stockton Independent, July 18: The prospect of not being able to get a large portion of their grain to market this season on account of the rapid fall of the river of late has caused the farmers of the West Side to look about pretty actively for storage accommodations for the fall and winter. The warehouses along the river are all being enlarged and we hear of one new warehouse being built at Crows Landing. Seventy-five thousand feet of lumber for the warehouse are being shipped up by Capt. Hamilton's steamers. The warehousemen have been expecting this condition of affairs and have not been in a hurry to fix the rates of storage until it was in demand. The rate will probably be about \$2 to \$2.50 per ton. The river is a very capricious stream in the length of time in which it is navigable. Last year navigation closed June 1st; two years ago the stream was navigable till September 1st, while this year it will probably close about August 1st. There was not as much snow in the mountains this year as had been expected.

SQUIRREL POISON.—Mr. Edward Moore, of the firm of Owens, Moore & Co., has for years been experimenting on a new preparation for dealing death and destruction to pestiferous squirrels, and has at last brought it to such deadly perfection that with a small quantity of the compound he recently killed 225 of the rodents in a few hours on a three-acre patch near French Camp. The tails of the animals are exhibited at the store. The poison is said to act so instantaneously that the squirrels are dead before they fairly swallow it. The compound is prepared in liquid form and is mixed with wheat for use. It is to be called "Moore's Prepared Strychnine." It is harmless to chickens, turkeys, and other fowls that have a craw, but deadly to ducks and geese. It promises good results.

EXPLOSION OF A STEAM CULTIVATOR.—M. S. Roberts, of Roberts' Landing, came up on the steamer yesterday morning with the information that on Tuesday last the mammoth cultivating machine upon which he has been experimenting for a year and which cost \$10,000, was totally destroyed by the explosion of the boiler, in a manner wholly unaccountable. Several Stockton parties were interested in the machine to the extent of about \$3,000 invested, and the news of the explosion will be very unwelcome

to them. Mr. Roberts, his son Martin Roberts, and his son-in-law, J. W. Perkins, had invested everything they had in the world in the machine, and had just perfected it so that it was a complete success, pulverizing the raw tules as fine as a flower garden. By the explosion they are completely ruined.

SANTA CLARA.

CATTLE STEALING.—Mercury, July 20: For some time past our cattle men have suffered severely from the depredations of thieves, and the officers have been on their mettle trying to discover and bring these depredators to justice. On the 26th of June Calvin Martin lost four steers from his ranch, on the Monterey road. Deputy Constable Edson, who has been working the matter up, arrested a few days since J. G. Sepulveda, Nicolas Sepulveda and P. Montoya for this last larceny, and last evening, in conjunction with Chief Haskell, he arrested Martin Lamaison, a butcher, on suspicion of being concerned in the transaction. In a pool, in the creek back of Lamaison's house, Edson found a hide, which had been placed there recently. It is red and white-spotted, and has a swallow fork in the right ear. An owner for the same is wanted at the City Hall. It is alleged that Lamaison bought the stolen cattle knowing them to be stolen, and afterwards concealed the hides. He stoutly asseverates his innocence, and claims that some one is conspiring to ruin him.

NEW WAREHOUSE.—A large brick warehouse, 200 feet long, 70 feet wide, with walls 20 feet high, will soon be erected by the Southern Pacific Railroad Company on the grounds at the southeast end of the present depot on the Alameda at San Jose. It will be used for the storage of grain and produce. President Davis was in town yesterday making the preliminary arrangements. The narrow-gauge railroad has been liberally patronized by the farming community and a rushing business is anticipated after harvest.

AGREEABLY DISAPPOINTED.—Gilroy Advocate, July 20: Mr. Doan anticipated a yield of 300 sacks of barley, but realized 450. The crops of other farmers in this vicinity have brought surprises equally pleasant.

SOLANO.

THE WHEAT YIELD.—Vallejo Chronicle, July 18: The total area planted in wheat in Solano county this year Mr. Carrington estimates at 113,000 acres, against 98,000 acres last year. While there is an increase of 15,000 acres in the land sown, he thinks the average yield per acre will be one-seventh less than last year. He puts it at seven and one-half bushels to the acre, which would make the total product of the county \$47,500 bushels. The area in barley is estimated at 50,000 acres, with an average yield of 13 bushels, which would give a total product of 650,000 bushels. The average yield per acre he estimates at five per cent. less than it was last year.

GRAIN AT DIXON.—Tribune, July 20: During the past week grain has been coming in at this point at the rate of nearly 200 tons a day. Since last Thursday, over 1,000 tons have been received at the warehouses and yards. About 1,800 tons in all had been weighed at the warehouse office up to Friday morning. Mr. Kelley states that the quality is slightly better than that of the first received. It is estimated that 8,000 tons of grain will be stored at Dixon this season. Grain has been coming into Maine Prairie for storage quite lively the last 10 days. Few or none of the farmers in that vicinity suffered from rust. Messrs. Agee, Burus, Haas, Timm, Kincaid, and all the parties in the vicinity of the late fire were more than ordinarily damaged by the rust. It reduced the yield in some places two-thirds or more, and in large spots the grain was hardly worth cutting.

SUTTER.

FINE WHEAT.—Banner, July 20: During the last seeding time, Mr. Joseph Hardy, of this county, planted some wheat received by him from the Agricultural Department at Washington, the sample being known as Toozell wheat. There were six ounces of it when sown, and the increase amounted to 222 pounds. The grain is very large and fine, is not withered, and commends itself to everybody who looks at it. Mr. Hardy intends to give it a trial on a larger scale the coming season. The increase is immense. At the rate named above, a bushel of 60 pounds would bring 35,200 pounds, or over a ton and a half of grain.

GRAIN CROPS.—Threshing having been in a great measure completed in our county, we are able to judge as to the quantity and quality of the grain raised. From the opinions of those best informed on the subject, the crop will reach about a two-third average, while in quality it falls a little short of last year's crop. In portions of the county it was entirely drowned out, and in a few spots the rust damaged it to some extent. Not near the damage anticipated, however, from this cause, has been experienced, the rust in many places seeming to attack the grain after it was too far advanced to be effected materially by it. Large quantities are being hauled to the warehouses in Yuba City, principally to the Farmers' Union, where there is already in store about 1,600 to 1,700 tons. As an earnest of the importance of Yuba City as a commercial point, we may mention that considerable grain is being brought from Yuba and Butte counties for storage here.

VENTURA.

AGRICULTURAL SOCIETY.—Press, July 13: The following gentlemen were elected officers for the

ensuing year: I. T. Saxby, President; J. G. Hill, Vice-President; M. H. Gay, Treasurer; C. D. Bonestel, Secretary; I. T. Saxby, R. G. Surdam and J. G. Hill, Executive Committee.

YOLO.

YOLO'S CEREALS.—Democrat, July 20: The wheat crop of Yolo county is turning out better than was expected a month ago. The best judges estimate that the yield will be fully two-thirds of an average crop, which, after all that has been said, may be called pretty good. The barley crop is splendid. Yolo can tide over easily any year on half a crop, but of course two-thirds is better; and when she has a full crop everything booms. We shall have a prosperous year in all departments of business.

Idaho.

TRAPPING JACK RABBITS.—Idahoan: Mr. Thurman is still capturing the jack rabbits about his farm seven miles below Boise City. He has three miles of brush fence, along which are placed his traps at points made convenient for the pests to jump over, and when one alights it strikes on a board which turns on a pivot, and down it goes, a doomed rabbit, into the trap. The trap re-sets itself for the next victim. There are seven men employed to do nothing else but run the traps, build new ones, etc. The number now caught averages 400 per day, or about a thousand pounds of meat, which goes to fatten 200 or 300 hogs. The hogs seem to thrive on the meat, the eating of which has no injurious effects upon them, notwithstanding it was asserted that the fur of the rabbits would clog their stomachs, producing inflammation and death. Mr. Thurman also saves the ears of the rabbits, for which there is a bounty of two cents per pair. One man is constantly employed in cutting off the ears and putting them on a string.

News in Brief.

THERE were 97 deaths in this city last week. SECRETARY THOMPSON is inspecting the Boston Navy Yard.

YELLOW fever has been very fatal at Vera Cruz and Yucatan.

GOLD discoveries are reported in Paraguay and Patagonia.

THREE THOUSAND catfish will soon be put into Clear lake.

GEO. M. KIELL & Co., of London, have failed for \$6,000,000.

THE run of salmon down the Columbia river continues very light.

WORK on the branch prison at Folsom will soon be commenced.

THE grain crops of Utah are the largest ever raised in that Territory.

GRASSHOPPERS are reported at the head of Deer Lodge valley, Montana.

THE Inland Empire says that the Chinese sell liquor to the Indians at the Dalles.

FIFTEEN car-loads of Mormon emigrants arrived in Salt Lake city last week.

THE Santa Barbara oil well is in splendid indications, and yielding some oil.

THE Russians advertise great quantities of war material in Roumania.

THERE are 1,100 whites and 500 Chinese at work in the Cassiar mines.

IRELAND beat England and Scotland at the 800, 900 and 1,000 yard ranges.

THE Catholic church at Santa Rita, Monterey county, has been burned; no insurance.

THE Fresno Republican estimates the grain crop of that county at 750,000 bushels.

SOME of the Italian journals violently oppose the acquisition of Cyprus by the English.

MYERS, the scout who was captured by the Indians at Camp Curry, was roasted alive.

THE Utah Bank of London, with a capital of \$800,000, has been opened at Salt Lake City.

JAMES GORDON BENNETT's steam yacht Jeanette left New York for San Francisco July 16th.

THE honey yield of San Fernando valley, Los Angeles county, this year, is estimated at 200 tons.

THE estate of the late Isaac Friedlander is valued at \$440,000, of which \$250,000 is cash in bank.

THE Ute and Apache Indians have all agreed to go on their reservations, and no further trouble is anticipated.

SILVER dollars in considerable quantities are being exchanged at the mint in this city at par with gold.

JOHN P. JONES, Senator from Nevada, was honored by a public reception on his return home to Gold Hill.

THE Piutes who left Paradise valley during the excitement three weeks ago are returning and going to work again.

TWO ledges of cinnabar and two of silver have been discovered in Placer county, about 25 miles from Sacramento.

FURTHER strikes have occurred among the workmen employed in silk and lace manufactures at St. Etienne, France.

AN Indian brawl occurred at Sitka in which four Indians were killed. The natives are favorably disposed towards the whites.

MANY farmers in Polk county, Oregon, are cutting their wheat for hay. Not more than a half crop will be harvested.

SANTA MONICA, Los Angeles county, which three years ago was grazing ground, now has a permanent population of 700.

DENNIS JORDAN's bid of \$161,500 for building the Branch State Prison at Folsom, has been accepted by the Commissioners.

GRASSHOPPERS have appeared in Hicks' valley, Marin county. They are small, and as yet have done no damage.

A PARTY at Coos Bay has killed, skinned and boiled 100 sea lions. Some of these weighed as much as 2,500 pounds each.

THE orange crop of Los Angeles county has increased from about 5,000,000 in 1871-2 to nearly 8,000,000 in 1876-7.

THE shipping of ties and posts from Cuffey's Cove, Mendocino county, is lively. Six cargoes have been shipped so far this season.

ACCOUNTS from Phoenix, Tucson, and Yuma, Arizona, represent the heat as excessive, the thermometer ranging from 112° to 116°.

THE weather is very hot in England and on the Continent. In some parts of the Exposition building the temperature is unbearable.

STOKES, the murderer of Fisk, is reported to be in Cornucopia district, Nevada, looking after some mining claims in which he is interested.

TEN THOUSAND nail makers in England have struck for an increase of 30% in their wages, and 10,000 more will join the strike this week.

THE native Californian who was hung by a mob last week at San Jacinto for the murder of Palmerston, turns out to have been an innocent man.

PANAMINT is now entirely deserted by white men, a fine mill and numerous buildings remaining as monuments to its former high mining hopes.

THE Territorial Pioneers will celebrate the anniversary of the admission of California into the Union at Pacific Hall on the 9th of September.

THE General Government has ordered a survey of San Pablo and Suisun bays, and the schooner Yukon is coming down from the north to perform the work.

A PLAN to take the Yoakum brothers from the jail at Bakersfield, Kern county, by a mob, for the purpose of lynching them, was frustrated by the Sheriff.

IN this city, on the 18th inst., the wife of G. W. Schenck gave birth to triplets, three boys, weighing in the aggregate 17½ pounds, all of them living and likely to do well.

THE exact amount of awards to American claimants by the American and Mexican Commission is \$4,025,622. The Mexican government has thus far paid in \$570,000.

ACTIVE preparations are apparent for a favorable change in commercial affairs in England. Reports from various centers of the iron industry are decidedly more encouraging.

IT is stated that an immense majority of the Russian people, as well as the mercantile community, and the wealthy as well as the lower masses, are heartily glad of a return of peace.

A BOILER in Davis' planing mill, at Barnesville, Ohio, exploded recently, destroying the entire building and killing three persons outright. Three more were fatally, and several badly, injured.

THE gross earnings of the Central Pacific railroad for the six months ending June 30th compare with last year's earnings as follows: 1878, \$7,839,537.03; 1877, \$7,463,138.64. Increase, for 1878, \$376,398.89.

THE National Liberals of Germany admit that they expect to suffer some loss in the approaching elections for members of the Reichstag, but think they will retain a majority in that body.

THE water in the Carson river is receding rapidly, and as the snow has nearly all melted from the mountains, it is feared the water mills will have to shut down before the 1st of September—earlier than was anticipated.

THE salmon run in the Columbia is considered nearly over. The catch has been fair this year but not particularly encouraging. The canneries as a rule have put up a slightly larger quantity this year than last, but the business as a whole has not been satisfactory.

FORTY-TWO vessels, aggregating nearly 50,000 tons, are now lying in this port under charter to carry wheat to the United Kingdom. Fourteen vessels are engaged for other purposes to different foreign ports, and forty-four vessels are on the disengaged list.

A CHINAMAN recently made application to Judge Shoate, of the United States District Court, New York, to become a citizen. The Judge denied the application under the decision of Judge Sawyer, of the United States District Court of California, in the case of Ah Youp.

THE American schooner *Paradise*, on her way from San Francisco to Portland, boarded a Japanese vessel on which was found no living person, but only a number of dead bodies of Orientals who seemed to have been dead for some time. As there was no food on board they are supposed to have died from starvation.

THE GENERAL CLIP OF 1878.—A dispatch from the Department of Agriculture at Washington, July 23, says: The wool clip of 1878 is about three per cent. greater than its immediate predecessor. New England fell off about five per cent.; the three north Middle States, three per cent.; Pacific States, nine per cent. All other States show an increase; the four south Middle States (Delaware, Maryland, Virginia and West Virginia) 1½ per cent.; the four south Atlantic cotton States (North Carolina to Florida), 2½ per cent.; the six west cotton States (Alabama to Tennessee), 14 per cent. The north Central States (Kentucky to Wisconsin), 1½ per cent.; States west of the Mississippi, four per cent. The heavy decline on the Pacific Coast is due to reduced production in California, and the great increase in the Southwest was in Texas.



Maud's Answer.

"Your beautiful Maud is fancy-free;
Just as she pulls a rose apart,
So doth she toy with a loving heart.
Take care!" said my sister, warning me.

I kissed my sister, for she is kind,
And loves me; but as we reached the gate,
I turned and told her I had a mind,
Nevertheless, to try my fate.

"Oh, brother, she's cruel as she is fair;
And the rich man's son is wooing there."
"Sister, I may be foolish and blind,
But—woman knoweth not woman's mind."

Cruel and fair! Take care, ah, take care!
Inward echoes like birds kept singing;
Across, through the shimmering summer air,
I could see Maud's hammock swinging.

"I will tell her the truth, and take her word;
I will not vex her by lover's sighing."
I said to myself as I stood by Maud,
Like a flower in her hammock lying.

She looked at me gravely with lovely eyes;
Then their falling lashes swept her cheek,
Where a flickering bloom began to rise;
But she did not smile, and she did not speak.

"I am poor, and I love thee." The tone was bold,
For my heart beat strong with the truth unsaid;
But after, in face of my secret told,
I had not courage to lift my head.

She stayed the hammock with one white hand;
I saw her little feet touch the ground;
I felt her come and close to me stand,
And the earth and the sky wheeled round and round.

From her lap the roses fell at my feet;
I could feel the waft of her fragrant breath;
The sense of her nearness was strange and sweet,
As the fullness of Life and the Trance of Death.

Then, whether with hope or whether with dread,
My strength came back with a leaping thrill;
Though my lips were close to her golden head,
I would not move till I knew her will.

"The household art is the only dower
I can bring, save myself, to him I wed;
Canst thou find the roof, and earn the flour?
Then I can make home, and sweet white bread.

"Thou art poor, art thou? Yet thou lovest me?"
Her pale face flushed with a burning red;
"Well, Maud is poor, and she loveth thee;
So now we are rich, are we not?" she said,

And faltered, all trembling with love confessed;
And I, with knowing I was so dear,
Trembled, but gathered my rose to my breast;
And Love was answered, and Life was clear.

Our Front Room.

"There!" said Bess, sitting down emphatically on the door-step and fanning herself with her wide straw hat. "There, that front room must and shall be furnished!"

"I wish it might be," observed Harrie dubiously; "but I don't feel much encouraged about it as yet."

"If I were you, Bessie, I'd order the suit in reps, and a tapestry carpet," I remarked sarcastically. "I'm afraid we cannot quite afford Aubusson and satin brocade."

"How much money have you, Harrie?" asked Bess, ignoring my irony.

"Five dollars and forty-three cents," was Harrie's reply, after an inspection of her pocket-book.

"And you Flo?"

"I have \$10," laughed I. "We shall not be able to rival the Bentons, I am afraid, Bessie dear."

The Bentons were our showy next-door neighbors, be it remarked, whose gorgeous parlor was at once the admiration and the despair of half the housekeepers in Norwoodville.

"The Bentons!" exclaimed Bessie with superb scorn. "Do you suppose, Florabella, that I would sit down in our front-room if it bore the faintest resemblance to that upholstery shop of the Bentons? Do you imagine—"

"Of course not!" I cried, with uplifted hands warding off any more indignation. "I don't suppose anything at all. But what has sent you struggling with that impossible front-room again?"

"Tisn't impossible," retorted Bess. "I have \$20 all my own; that makes \$35 between us. Now, if you girls will follow my directions, we can take that \$35 and furnish that room."

"How?" I queried, helplessly; while Harrie evidently thought it of no use to say any more to a girl who talked such absurd nonsense as furnishing a parlor with \$35.

We were three orphan sisters, keeping house together on an income so ridiculously small that any outlay for new furniture was quite out of the question, and yet the one desire of our three hearts was to furnish our parlor, a pretty room but bare as any barn. We had a conveniently appointed kitchen; and a cool clean dining-room, where we sat in the afternoons with our sewing. Our bedrooms were comfortably furnished; but for the parlor we had not so much as a table.

To-morrow our quarterly income was due, but that we must live on for the next three months. So the \$35 left over from this quarter was all we could possibly count on, and that seemed too small a sum to think of in connection with the furnishing of our front room.

Bess was our head and shoulders, our right hand, our mainstay; and her capabilities in the

A POPULAR SONG AND CHORUS.

"BABY MINE."—By Herbert Smith.

3. I'm so glad. I can not sleep Ba-by mine, ba-by mine, I'm so

1. I've a let-ter from thy Siro. Ba-by mine, ba-by mine, I could
2. Oh, I long to see his taco. Ba-by mine, ba-by mine, In its

3. hap-py I could weep, Ba-by mine, ba-by mine. He is sail-ing o'er the sea, He is

1. read and never tire, Ba-by mine, ba-by mine. He is sail-ing o'er the sea, He is
2. old ac-cus-tom'd place Ba-by mine, ba-by mine. Like the flowers of May in bloom Like a

3. com-ing home to me Yes, he's com-ing home to me. Ba-by

1. com-ing home to me Yes, he's com-ing home to me, Ba-by
2. stay be-hind the gloom; Like the sunshine in the room, Ba-by

3. mine, ba-by mine, He is coming home to me Ba-by mine.

1. mine, ba-by mine, He is coming home to me Ba-by mine.
2. mine, ba-by mine, Like the sunshine in the room Ba-by mine.

CHORUS.

SOPRANO. Lul-la by Ba-by sweetly slumber, Angels are guid-ing him over the sea

Lul-la by Ba-by sweetly slumber. Angels are guid-ing him o-ver the sea.

Lul-la by Ba-by sweetly slumber. Angels are guid-ing him o-ver the sea.

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Lul-la by Ba-by sweetly slumber. Angels are guid-ing him o-ver the sea.

blue-and-white chintz—a distractingly pretty pattern, and bought at a bargain! With this she covered that unpromising sofa, stuffing the cushions with corn-husks; and the two big, square pillows were ornamented at each corner with Harrie's pretty tassels. Upon my word the sofa was as pretty an article of furniture as the Bentons had in their house.

Then Ben brought us two large easels, or hogsheds, or whatever you call them, sawed down lengthwise to the proper heights for a seat, and then sawed crosswise, and a board fitted in. These also were covered with the pretty chintz, and well cushioned with husks, and they made the coziest arm-chairs imaginable. Harrie finished them off with crochet and netted tidies. Bessie's ottomans were simply two soap boxes cushioned on top, and covered with chintz.

We took a few chairs from the other rooms and added to this array. We cut engravings out of old magazines, and framed them with straw and *pass partout* frames; took the fine landscape painting from the dining-room and brought it into the parlor; Bessie brought down her pet chromo of the "Cenci," from her bedroom, and placed it between the eastern windows; we filled two great conch shells with growing vines and suspended them at each corner of the high old-fashioned mantel-shelf, now prettily "upholstered" in blue cretonne. And our front room was finished.

I say nothing about the flowers with which our room was adorned, but perhaps they did more than anything else to make our room attractive to us and to all our friends. It was cool and dainty to the eye, and all summer our friends kept telling us how pleasant it was to come in there and sit down. Sam and Millie Benton came in often of an evening, and they thought it a prettier room than their mother's grand parlor.

And all for \$35.

"And 43 cents," says Harrie.—*Bullou's Monthly.*

Santa Cruz Sunshine.

EDITORS PRESS:—Sitting in the sunshine, with a book and writing materials within easy reach, I hesitate whether to read or write.

The glorious landscape spread out before me with the glistening Monterey bay in the distance, prompts me to try to tell your readers what a lovely spot Santa Cruz is. If one is tired of business pursuits, of giving and receiving calls, of the monotonous routine of house-keeping, or of teaching, come to Santa Cruz for a breathing spell.

Rise early, and climb one of the hills to see the sun rise, when the air is moist with dew and fragrant with flowers. Take a ride to the beach during the forenoon and see the hordes of sea bathers in their grotesque costumes, or join a picnic party to the big tree grove or on one of the many charming beaches beyond the town.

By all means bring all the children along, for there is fun enough for all.

Moonlight rides either in boats on the water or on horseback, or jollier still, in a wagon without springs half filled with hay and a merry party of singers.

Then the camping out is another great attraction, with fishing and dove shooting for excitement. The stories around the camp fire at night, and impromptu charades and tableaux accompanied by choruses and comic songs, inhaling the while the spicy mountain air, all tend to give one a new lease of life. It is a charming way to become thoroughly acquainted, and sometimes wicked Cupid takes advantage of the occasion and more than one happy marriage has been the result of a few days of camp life.

If any one doubts my assertions, let him or her come and judge if I misrepresent matters in and about our merry little city on the Monterey bay.

Santa Cruz, Cal.

New Music.

With a view of making our "Home Circle" a more inviting retreat, we expect from time to time to give reduced transcripts of the popular music of the day. Our space will not allow us to give selections entire, but a knowledge of the leading part will enable our music lovers to judge whether the composition pleases or not. If they like it they can order the full sheets of the publishers with some idea of what they will receive.

"Baby Mine," which we give this week, is a pretty little song and chorus which seems to seize upon the popular ear and heart, and is the latest home song.

"SUNDAY AFTERNOON."—This is the title of a new magazine published at Springfield, Mass. It has just finished its first volume and demonstrated its right to exist by speedily obtaining a strong hold upon popular appreciations. It is not a religious publication in the strict sense of the term, and yet it earns its title by truth to religion and morality; truth to the highest and purest in human life; and truth to the most chaste literary taste. It has won the contributions of our best magazine writers and the approval of our leading authors. Its contents embrace brief and inviting essays on timely subjects, entertaining and wholesome stories, good poetry, and pertinent editorial comments. We have withheld remarks upon the publication until we should perceive its true character, and we find it to be a magazine which we can freely recommend to the "Home Circle."

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way of getting something out of nothing were truly remarkable, as witnessed by the fact of her possessing more money at the end of the quarter than both her sisters; though we had all the same allowance for our personal expenses, and Bessie's were the heaviest, on account of her being the largest and requiring the most dress material. Yet in spite of Bessie's genius, the furnishing of that front room seemed exceedingly problematical.

"There is my contribution to the funds," remarked Bess, placing her \$20 on the top step. I deposited my \$10 beside it, and Harrie followed with her \$5.

Then we looked at Bess and awaited an explanation.

"I have been reading in the magazine," said Bess, "about a woman who furnished her parlor with \$30, and had the prettiest room in town."

"But we have only \$35," suggested I.

"And 43 cents," supplemented Harrie.

"Well, that woman bought some things which we need not buy," replied Bess. "To be sure she had a set of lovely old chairs which belonged to her great-grandmother, and which have just come into fashion; and somebody else gave her a pair of pictures, and somebody else presented her with a statuette; and—"

"Do stop, Bess!" I cried, imploringly; while Harrie went off in a violent explosion of laughter.

"I don't suppose anybody will give us a picture, or beg the privilege of keeping a piano in our front room," said Bess candidly; "although that happened to the woman in the magazine. What I want is Ben Bradshaw's piano and saw; and Ben himself to operate them, and an old barrel or two."

"I suppose Ben and his tools are to be had for a thank you," remarked Harrie, "and there are barrels enough in the woodshed. They are good enough, too. What are you going to do with them, Bess?"

"You shall see," said Bessie, smiling wisely.

"At present let us go to Merriion's and get some of that lovely straw matting for the floor."

"Straw matting will do very well for the present," said I; "but when it comes cold weather—"

"We must not begin to think of cold weather in May," interrupted Bessie. "Perhaps by November some good luck will bring us a carpet. In summer, matting is a positive luxury."

We went to put on our things, of course, preparatory to visiting the carpet store; for we always obeyed Bessie's order.

When we returned from the expedition we were accompanied by a man with a wheelbarrow; and in that barrow were 26 yards of blue and cream-colored matting, of a nice quality, which we had bought for 50 cents a yard; also eight rolls of pretty gray paper, at 50 cents a roll. When the paper was up and the matting was down, our front room was very clean and cool to look at.

"But we could look at the pretty matting

and blue-gray paper in Merriion's store just as well," said Harrie. "And I don't see where we are to get any furniture. Our ancestors did not leave us any antique chairs."

"We will make the curtains first," said Bessie, cheerfully, coming in at that moment, with her hat on and a bundle in her hands. "I've just been down street and bought the materials."

And Bessie opened her bundle and displayed a roll of snow-white muslin and some pale-blue cretonne.

"I paid 40 cents a yard for the muslin," she said, "and I bought 15 yards. Five yards to a window will be plenty, it is so wide. And the cretonne will make charming shades. It was 60 cents and here are six yards. We'll make some lambrequins of it, too, for the windows, and for that ugly wooden mantel-shelf. You can make some blue-and-white tassels, Harrie, like those on your tidy, but larger. And here are the fixtures for the shades. They cost a \$1.50 for the three."

So we hung the blue shades in our three windows, with a blue-and-white crochet tassel pendent from each; and over them we draped the full white muslin curtains, with pretty blue lambrequins at the top. Harrie sacrificed her freshest blue ribbons to loop the curtains, though Harrie is a blonde, and blue ribbons are very becoming twisted among her golden ringlets.

"Why it is charming!" she cried, admiringly, regarding the effect from the doorway. "Now, Bessie, bring in your furniture!"

"Ben will bring the table this evening," said Bessie. "And I can promise a lounge and two arm-chairs and a pair of ottomans. There! my ideas and the money will give out together."

Ben did bring the table—a great, round pine affair, of his own manufacture, rude enough, certainly, but he planed it smooth and stained the legs with amber, in imitation of walnut, and even that did not matter much, for very little of them showed when Bessie had covered it with a sheer-cloth, abstracted from the dining-room.

"There now!" she replied in triumph; "could anything be neater? It will hold piles of books and papers, and that's all we want it for. Who's going to lift the cover to see if it is walnut? We will cover it with white cloth for the summer (thank our stars we have plenty of table linen!), and next summer I promise to save \$10 from my allowance to buy a cover for it. I had Ben make it nice and big, because I hate a small table; I like one that everybody can gather around and be sociable."

After the table followed, at intervals of a day or two, the other articles which Bessie had enumerated. First, a lounge—perhaps it would be better called a sofa—composed of a long packing-box, with one side knocked out, and a square block under each corner. These square legs were stained with amber, in imitation of walnut, like the table legs.

Bessie expended all the rest of her money for

"Have" or "Be."

EDITORS PRESS:—If our Lord's beatitudes were submitted to a popular vote in California, I wonder whether their "platform" would be "endorsed."

Would it be "Blessed are the poor in spirit," or "Blessed are the rich in pocket?" Anyway our actions speak all too plainly in favor of our belief that to the latter class alone is blessedness possible.

What young man, "starting in life," but has for the goal of his ambition, not the achievement of excellence of character, but the attainment of a proud pre-eminence as a possessor of dollars untold? Even in his contemplation of matrimony, his views run suspiciously in the rhythm of the popular rhyme,

"This fine young woman's very tall,
Of course she's very thin,
What a tiny thing her heart must be,
If she's one at all within!
No fine young girl need have a heart,
If she's only lots of tin," etc., etc.

Moreover the gentler sex seem entirely bitten by a dog of the same color. In spite of Shaksperian warnings that "crabbed age and youth cannot live together," age, with one foot in the grave, if amply endowed with "the needful," seems to be far preferred to youth unblessed with that indispensable requisite to any large extent. Like Hood's illiterate female, their

"Cupids are all Cupidities."

Now there are certain facts that every age, no matter how far advanced beyond the dullness of their progenitors, must learn for themselves. One of these facts is the difference between value and worth. Things may have great value and yet be quite worthless. A jeweled cup might have a value of thousands of dollars, and be of less worth than a drink of water to a poor wretch perishing from thirst. A man may possess "all that heart could wish" of hard cash, and be of all men the most miserable—hated by his fellows and hateful to himself. Our very word for an accumulation of gold, "miser," is the Latin equivalent to our "miserable."

Such a one may be the object of our envy or our jealousy; scarcely of our love. We don't want to make bosom friends of such. Says Schiller—

If thou hast something, bring thy goods,
A fair return be thine;
If thou art something, bring thy soul,
And interchange with mine.

The world's sober verdict corroborates the sentiment. History notes not men who *had*; but men who did, who thought, who bled; women who loved, who suug, who suffered. These are characters dear to the historic muse.

Marriages, contracted on the filthy lucre basis, inevitably prove that tho' only one of the parties, perhaps, was bought, both were surely "sold."

The recent annals of Californian jurisprudence pointedly prove the portraiture of old Chuzzlewit, as portrayed by Dickens. The millionaire has again and again confessed to his miserable mistake in making money his mark.

I want to warn the young readers of the RURAL against deferring their life's work until they have acquired a store of coin of the realm. Real worth is what the world wants. It is love, love, love, as the old French song says, that makes the world go round, hard cash don't do it.

Moreover, there is a realm where coin is not currency; where greenbacks are not even legal tenders, at the most fabulous discount. Can we not do our best to instill into our own, and our children's minds, that it will conduce far more to even our earthly happiness if we will lend our best energies to the laying up of treasure, current, not only among living humanity, but in that hoped-for and longed-for

"sphere
Where all is made right which so troubles us here,
Where the glare, and the glitter, and tinsel of time
Fade and die in the light of that region sublime,
Where the soul, disenchanted of flesh, and of sense,
Unscreened by its trappings, its show and pretense,
Must be clothed for the life and the service above
With purity, truth, faith, meekness and love."

Let us all strive to realize that a "man's life consisteth not in the abundance of things that he possesseth." Let us glory not in what we have, but in what we are. Finally, *Laus omnis Deo*. EDWARD BERWICK.

Monterey, Cal.

AN ANECDOTE OF JENNER.—The celebrated Dr. Jenner, who introduced vaccination, was a man of genial wit, and the following lines addressed to a lady upon the recovery of her daughter, and sent with a pair of ducks, afford a fair specimen of his facetious vein:

"I've dispatched, my dear madam, this scrap of a letter,
To say that Miss is very much better;
A regular doctor no longer she lacks,
And therefore I've sent her a couple of Quacks."

THE HAIR BUSINESS.—Our human hair prospects are improving. According to the figures furnished us by the Bureau of Statistics our imports of human hair from France in 1874 were valued at \$148,000; for 1875, \$88,514; for 1876, \$17,887; and for 1877, only \$5,830. So it seems probable that in the course of a year or two more we can raise our own hair. These figures *hair* encouraging. Our Western Indians have also a good reputation for hair raising.

A THORN in the bush is worth a dozen in the hand.

YOUNG FOLKS' COLUMN.

Dan Bascom's First Bear.

(Written for the RURAL PRESS by WINNIE WINTER.)

Little Dan Bascom lived on the frontier, in the wild woods of the far northwest. His father had built a log cabin there, and had enclosed it, together with a small piece of ground, inside a fence or stockade made by driving pickets firmly into the ground. Dan was eight years old at the time we write, and this little yard was his play ground. It sometimes happened that he was left at home alone, and at first he felt rather lonesome, but he soon got used to it and amused himself by turning somersaults, teasing the Muscovy drake, and riding on the Nannie goat's back. He had been forbidden to open the gate or go outside the yard unless accompanied by his father or mother, because of the bears and other wild beasts that were continually roaming about the woods.

One afternoon his father was away at work in a clearing some distance from the house and his mother had gone on a visit to a neighbor, several miles away, leaving Dan in charge of the cabin and a large pot of lye swung on poles at one end of the yard that was being boiled down for the purpose of making soap. Dan frolicked about for a long time, until finally getting tired he went and sat down on a stool near the pot of lye, which he kept boiling briskly with a good fire underneath. While he was sitting watching the lye boil he began to think about bears, and wondered if there was any danger of their getting into the yard, because, said he to himself, "I don't mind dead bears like the one's father brings home occasionally, but a real live bear that can scratch, and bite, and hug, (father says they are very fond of hugging, and sometimes hug people to death), this kind of a bear I think I should be afraid of."

"Now let me think what I should do if a real live bear should walk up and jump over the fence. I couldn't get into the cabin, because that's at the other end of the yard, and the bear would catch me before I got there. I might holler, but father is so far away that he could not hear me. Here's a chicken coop I could get under, but the bear could easily turn that over with one of his paws, or here's a tree I could climb, but father says that bears are very expert climbers, and so he could walk right up the tree and haul me down. Well, I don't see any safe place that I could get to, unless I could get into the cabin, and perhaps after all the bear won't come; if he does, I suppose I'll have to 'trust in Providence,' as preacher Trust-all says, to take care of me, but I'm afraid that trusting in Providence won't do a feller much good when a bear gets hold of him. What's bears got agin boys, anyhow, boys don't bother them, and I think they might stay to home and tend to their own business."

Just then Dan heard a cracking of sticks outside the yard, as if some one was walking there, but he was too much frightened to get up and look, so he sat quite still and listened. Pretty soon he heard a low growl, and saw something like the snout of a hog poked through the fence near the other end of the yard, then the pickets were shoved forcibly aside and in walked a great big bear, followed by a cub, a frisky little fellow, who danced about and rolled over on the ground like a kitten. Nannie was lying on the doorstep, but when she saw the bear, she jumped down and crawled quickly through a hole under the cabin.

Poor Dan was so scared that he forgot all about his chicken coop or his tree, but he crouched down behind the pot, trembling all over, his hair standing on end, and his heart going thumpety thump. He now thought his time had come, and he could not think of one good thing that he had ever done, but all the bad things stared him full in the face, and he began to pray very earnestly, saying, "O, Lord! I've been a very bad boy, I've teased Nan and the drake, I've been disobedient to mother and said naughty things to her, and I have actually lied, and stole sweetmeats out of the pantry; but O, Lord! I am very sorry, and if you will just forgive me this time, and not let the old bear eat me up, I'll promise to be one of the best boys that ever lived, I'll work hard and not want to play any, but will be a good industrious boy all the time."

Meantime Mrs. Bear walked up to the cabin, smelt all around and tried to get into and under it, but failing to do either, she lay down in front of the hole, through which Nannie had disappeared, like a cat watching a mouse; but cubbie didn't seem inclined to keep still. He kept running about here and there, and at last came to where poor Dan sat quaking with terror, and running up to him he put his paws playfully upon him, as much as say, "Come out, old boy, and let's have a tussel." But Dan, not caring for such a playfellow, pushed cubbie away, but cubbie seemed to think this the signal for commencing the play. So he grabs Dan, pulls him over on the ground and rolls over and over with him, Dan struggling in vain to get away from him. Mrs. Bear, hearing the noise, gets up and walks over to where Dan and cubbie are tussling, sits down on her haunches and looks on, apparently much pleased with the performance of her offspring. For 15 or 20 minutes Dan exerted all his strength to get away from

his tormentor, but cubbie held him fast and kept rolling him over until Dan was out of breath and lay quite still. Cubbie pawed and shook him, but finding no more play in him, went away a few paces and stood watching him. Meantime Nannie was bleating from under the cabin and Mrs. Bear went back to make her acquaintance.

Dan lay very quiet until cubbie started for him again, when he suddenly, forgetting his fright in his anger at cubbie for using him so roughly, jumps up, dips out some hot lye and throws it upon cubbie, who runs away howling to his mother. Mrs. Bear, not well pleased at the treatment of her cub, starts for Dan with an angry growl, but Dan, seeing the good effect the hot lye had on cubbie, thinks he will try the same thing on Mrs. Bear, and as she comes up, he dashes a dipperful right into her face and eyes. This blinds her so that she cannot see, and burns her so badly that she jumps about and rolls over, howling madly.

In a few minutes Mr. Bascom rushes up, rifle in hand, opens the gate and looks rather puzzled at what he sees going on, but seeing Dan at the end of the yard, he inquires of him what has happened, and when told he laughs heartily, but says, "We had better put the poor creature out of her misery, for she will never be able to see again, and she'll make meat enough to last us quite awhile." Then making Dan sit down behind the stool, he cocks and places the rifle on it and puts the butt against Dan's shoulder, while he kneels down behind Dan and says, "Now, when I call out pull the trigger quickly." Then sighting along the barrel he cries out "pull." Dan shuts both eyes and gives a quick jerk on the trigger. Instantaneously there is a loud report and Mrs. Bear tumbles over quite dead.

"Now, Dan," says Mr. B., who has been examining cubbie and found him only a little scalded on the back, "we'll keep this chap and make a pet of him for you."

"Oh! No, father, please not!" cries out Dan, "he's too rough; he bites and scratches awfully."

"Never mind that," says Mr. B., "we'll teach him how to be gentle. The roughest people, when properly educated, are often the most amiable."

At this juncture, Mrs. Bascom appears on the scene, and Mr. B., lifting his hat, cries out, "Mrs. Bascom, allow me to introduce you to Dan's first bear."

How they succeeded in cubbie's education I will tell at another time.

Fountain Dell, July 10th.

GOOD HEALTH.

Tobacco's Devotee.

Ebenezer learned to smoke

When he was of a tender age,
And he could smoke and spit and chew,
And thought himself a sage;
And smoked till he was bald of head,
And chewed till he was almost dead.

He married Susan Glen, you know,
And she was pretty, young and fair;
But soon he smoked her till her face
Was just the color of her hair;
And kept her eyes and eyelids red
As those who weep for loved ones dead.

She loved him once, until she found
That his tobacco was his god;
He lived for it and worshipped it,
Till he was but a stupid clod;
And selfish self-indulgence seemed
The only hope of which he dreamed.

His poisoned children could not live,
Yet still he smoked and chewed the same,
And quarreled with his heart sick wife,
Because she knew he was to blame;
And all the burdens, toil and care,
Her slender shoulders had to bear.

The love he promised her went out
In smoke and chew, and chew and smoke;
And she would sadly mourn and grieve,
For it was certainly no joke
To see all manliness and use
Stewed out in strong tobacco juice.

Tobacco grew too weak in time—
Liquor was craved, and it was used;
The wife so sad and worn before,
Was now most cruelly abused;
And she would mourn and grieve and pray,
In hopeless sorrow night and day.

Paralysis, with lightning thrust,
Laid Ebenezer low at last,
And all his errors and his sins
Were with the unburied past;
And Susan, withered, sad and lone,
Had neither money, friends nor home.

Results of Sanitary Regulations.

The agitation of sanitary regulations has continued for some time, and it is fair to ask what has been the result of their enforcement. In a paper lately read before the Social Science Meeting at Cincinnati, Dr. Nathan Allen, of Massachusetts, said: It is not time yet to obtain the full benefits of such means; for while the advantages of observing some sanitary laws may be seen very soon, it will take many years to reap the complete benefit of others. In certain localities in Great Britain, where these laws have been only partially applied for a few years, there has been witnessed a marked decrease in the amount of sickness and rate of mortality. From careful investigations it is estimated that this diminution will already range from one-fourth to one-third; but it is the opinion of the best judges on the subject that, when sanitary science is faithfully applied,

there will be a decrease of more than one-third of the sickness and mortality which formerly occurred. The immense advantage, or value, which will be gained by this prevention of disease, in the saving of time and expense, in the prevention of pain and distress, in the general improvement of health and prolongation of life, cannot be estimated in figures or described in language. The more extensively and thoroughly these principles are applied, the greater good will they accomplish, and the more perfectly we shall find the laws of the external world adapted to the human system, showing that man has a far greater control of those laws than has generally been supposed.

Another important consideration is, that the more thoroughly sanitary agencies are applied, on a large scale, they not only serve directly to prevent disease, but furnish essential aids in curing it. Thus the more you improve ventilation and the quality of water, drainage and sewerage, and have regard to dietary habits and physical exercise, etc., the more successful will be the operation of all therapeutical agencies.

DOMESTIC ECONOMY.

Cool Drinking Water.

EDITORS PRESS:—I have tried the plan adopted in some hot countries, where ice cannot be had for cooling drinking water, and am so much pleased with it that I give the method, which probably has been published before, but as some may not have seen it, and as the plan is very simple, I send it, feeling satisfied that no one who tries it will be disappointed with the result. I bought half dozen tin milk-cans holding four gallons each, and covered them with coarse thick canvass of a kind that absorbs water easily, drawing the cloths tightly around the cans and sewing them so that they could not get off. At night the cans are dipped in a tub of water until the cloths are thoroughly saturated, they are then filled with water and set where the breeze will blow upon them, and in the morning the water is quite cold and remains so during the day if the cloths are wet occasionally and the cans placed in the shade where they are exposed to a current of air. The men on going out to work take as many cans of water as they will need, and so have the luxury of cool water to drink during the heat of the day. Any kind of coarse cloth will do to cover the cans, the thicker the better as they won't need wetting so often, but the cans must be kept closed and the cloths wet to insure success. Dr. KINSMAN.

July 6th.

Household Economy.

EDITORS PRESS:—Some one sent to the RURAL PRESS a budget of home topics, a few weeks ago which deserve a place in every lady's cook-book. I quite agree with the lady regarding the saving of time and labor by using cream instead of first making it into butter for all culinary preparations.

The best of pie-crust can be made of flour with a little salt, wet up to the right consistency with thin cream, (either sour or sweet) without soda. The acid seems to work off in the baking, leaving the crust tender and flaky. Crullers wet up with cream and eggs without any other rising are most excellent.

Sour cream put into mashed potatoes instead of milk and butter should be tried to be appreciated. N.

Santa Cruz, Cal.

BEEF-A-LA-MODE.—Procure a juicy and tender round, or part of a round, according to the size of family, and cut out the marrow bone, make a stuffing of bread crumbs, a little melted butter, salt and pepper, a pinch of thyme, sweet marjoram and summer savory, pulverized and mixed together, a small teaspoonful of ground cloves, and three tablespoonfuls of water, just enough to moisten the bread crumbs. Have ready some strips of good solid salt pork; score thickly, and fill the places alternately with a strip of the pork and the bread crumbs. Reserve some of the crumbs for the gravy. Next, bind the beef with a stout twine, into a round shape, spread slices of pork over the top, and place the beef upon a wire rack that will sit upon a dripping pan, and allow the juice of the meat to fall through; put a pint of water in the pan and place in the oven; baste the beef very frequently with water that has had onions boiled in it. When done place the gravy pan upon the range; add more water from the onions, the reserved crumbs, two table spoonfuls of vinegar and browned flour enough to impart a rich dark color; blend all well together, boil for a minute or two, and serve with the meat; a few spoonfuls of gravy poured over the meat when dished is an improvement. Serve the boiled onions either in a dish by themselves or upon the platter with the meat. The marrow from the bone chopped fine and added to the stuffing enriches it.

ROWLEY POWLEY.—Roll out a large sheet of paste, cover it with any jam or marmalade you prefer, roll it up and tie it loosely in a cloth, tie each end of the cloth tight, boil it one hour and cut it in slices; it is good served hot with wine sauce.



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The Week.

Day after day, as the dispatches have brought accounts of the death-dealing and long-continued heat all over the Eastern States, there have burst from California lips earnest expressions of admiration for our more moderate summers and thankfulness that to us it is given to enjoy them. The description of the heat ravages from the Missouri river eastward to the Atlantic is most appalling. In the large cities scores of men have fallen in the streets, have been carried to the dead-houses and have been quickly interred, as the dead are buried in time of pestilence. In the villages, cases of sunstroke have been less frequent, but not less fatal, and in the grain-fields many a laborer has been stricken down never to rise again. We have nothing in this State which answers to such a description of human loss of life and suffering. We have potent heat at times in the interior, and within the last few years there have been, at intervals, cases of prostration, but the general effect of the same degrees of heat here and at the East is very different. We have none of that deadening condition of air which at the East is known as "muggy;" weather which afflicts everything, making every bodily movement a burden and even affecting the inanimate creation, as it spoils the milk even when fresh in the cheese-makers' vats. We are fortunate indeed in our freedom from these dark deeds of the elements.

The harvest is progressing. In some parts it is proved that the farmer will thresh more than once was thought, because the rust has not wrought as bad effects as was anticipated.

Men and Machines.

Several notable advances made of late in the design and manufacture of agricultural machines, have awakened anew the discussion of the effect to be expected from the growth of labor-saving machinery. The question is an old one, and we do not see that anything has occurred which should change the old verdict that, though the introduction of a new labor-saving implement may, for a time, work to the disadvantage of certain bodies of citizens, there soon follows an adjustment of affairs to meet the innovation, and the stream of progress and prosperity pours along just as deep and wide as ever. Just now there is the louder outcry because agriculture seems to be enjoying unusual favors from the inventor. People generally have come to falsely look upon agriculture as a dull, plodding and intensely conservative industry, and they are the more surprised and alarmed when their eyes are pried open by the levers of some new machine and they behold the lifeless occupation alert and moving forward, rapidly forward. The people affect to be alarmed because the self-blinder has excited the threats of a few men whom their own State has justly pronounced outlaws. They peer into the future through clouded eyebrows, because the header and thresher have been successfully combined and the farmer's power over his field has been increased many fold. We do not see why these improvements should excite greater alarm than other just as great improvements which have aided the manufacturer, the miner and other producers in their work. Is the self-blinder a greater advance from the sickle than the power loom is over the cloth-making apparatus of our grandfathers? Is the combined header and thresher more effective in labor-saving over the old swinging cradle than the many-stamp quartz mill is over the primitive arrastra? It is common to cite the indignat protests of the London pressmen over the introduction of the power press as an example of mistaken zeal, because the increased demand for printed matter afterward kept them all fully employed, even with the best machinery which could be devised to aid them. Nor has the progress ever halted for an instant. The people now demand such a number of papers upon their breakfast tables that they must be supplied by a press which helps itself from a continuous roll of paper, makes its impressions, cuts and folds its sheets ready for the carrier turning out, without human aid, its thousands of impressions, where its forerunner issued hundreds, with the aid of many hands.

It is time that the progress of labor-saving machines in agriculture may not find its beneficial effects wrought out in just the same way that they have been in the progress of other industries, but this gives no reason to distrust their ultimate coming. There is every evidence to argue by analogy that the results will be ultimately good. There is no welfare of the race which demands that one industry should be speeded forward and another held stationary or restricted to sluggish growth. This theory has prevailed to a certain extent, it is true, and it has been held by other people than politicians that farmers should occupy the back seats in the car of progress, but such an idea is false to every sound theory of political and industrial advancement.

It is a plain fact that without labor-saving machinery the agriculture of all the newer States would remain undeveloped to this day, and the rapid increase of people in this country would be swarming, shirtless and supperless upon the Atlantic seaboard. Without labor-saving agricultural machinery California could never have exported a pound of grain; her few farmers would have done well could they have fed themselves and the miners. With such a history of results attending the progress of agricultural machinery, why should we distrust its further advancement? With leagues of uncultivated land in our own State, why should we malign the very agency which is to bring it into profitable production? With the great unoccupied northwest, which can yet be carved up into prosperous States, with climate and fertility which the world cannot surpass, why should agriculture be called upon to halt in her advancement when she alone holds the key which can unlock these treasures?

It is true, perhaps, that the growing application of machinery to agriculture will work hardship to some of our laboring population, as successive improvements are first reached. This is to be regretted, but it seems unavoidable. This seems to be the price at which the nation buys every step in industrial progress, but as this hardship has always heretofore been followed by compensations, why should it now come without attendant rewards? It is not given to the most far-sighted to penetrate the future, except as the past indicates its probabilities. This method of forecasting the future certainly gives assurance, not ground for alarm, in the special line which we are considering.

We cannot see how help will come to the thousands whose work the new machines are doing. Agriculture has so long been looked upon as the kind mother who shall feed and clothe all the broken and distressed from all other occupations, that it is little wonder that her reduced dependence upon manual labor is

viewed with anxiety. It is easy to say that, as an abstract proposition, it is plain that men must enter agriculture more as masters than as journeymen; that those who are thrown out by the progress of agricultural machinery must go upon the new fields at a distance and build themselves up as those have done who are now profiting by the use of the machines that laid the foundations of their prosperity. How shall they who are now tramping from kitchen to kitchen around the State be embued with the disposition to move into the open lands and to do there what they fail to do here, namely, to labor. And how are they who have the disposition, but cannot find work, to get start enough to get to promising fields and obtain food, seed and implements with which to maintain themselves and put in their crops. This we acknowledge we do not know. To restore the qualities of manhood in those who are heartless, homeless, ambitious, is perhaps a problem in mental, moral and social science which the doctors in those philosophies can solve; we cannot. To provide material for those who have the will to use it is a question of finance and political economy which is beyond our pocket and our brain. And yet while stumbling on these blocks hewn from the impossible, we are strong in the belief that other causes than the progress of labor-saving machinery are to blame for much of the evil and lack which are in these men's minds and stomachs. So far as mechanical progress is concerned we believe it will be, as it has been, one of the chief agencies in the world's advancement. None can stop its course. Those are safe who can climb into its car; those in danger who sport beneath its wheels.

Agricultural Education.

EDITORS PLEAS.—If you had a boy and girl to educate (the boy now 17 and the girl 15), and the boy wished to be a first-class farmer and stock-raiser (being well-fitted intellectually and physically so far), and the girl wished to get a good start towards horticulture, poultry and dairying, with enough of music and taste for good reading to make life pleasant, what would you do with them? So far as I know of schools, there are more text books and useless forms gone over, than little bodies and minds can emerge with any brightness from.—Mrs. G. E. CHILDS, Santa Barbara, Cal.

It is difficult to prescribe in a case where you have no knowledge of the symptoms. What might be a wise and attainable course with our boy and girl might be unwise or beyond the reach of another's children. The converse might also be true. It would be impossible to give advice which would apply to any particular case, without knowing exactly the ruling conditions. We will, however, show our respect for our correspondent's questions by outlining our belief as definitely as possible in the space which we can give to the subject.

First: Our boy has grown up with us upon a stock ranch. We have followed the business in a practical way for years. We have never mastered the mysteries of herd books or pedigrees, but we have learned long ago that there is a great difference in animals, and that by breeding from the best we could improve our cattle in many ways. We have found that a constant supply of different kinds of nutritious food was a powerful aid in our breeding improvements. In our daily work we have continually come upon questions which we did not understand, and upon which we have longed for more light. We have not had time or facilities for investigating these questions, and yet we have felt sure that they might be investigated and determined. We have resolved that our son shall learn how to investigate, and that he shall be made familiar with all the principles which underlie our practice, so far as they can be made known. We have taught him all the details of our work; we have been gratified to see that he takes a deep interest in our business. We have allowed him to consider some of the animals and their increase his own. We have him joined to us in sympathy; and by trusting him and confiding in him we have led him to see that there is a future before him in farming, and that by increasing his knowledge in all directions which bear upon the industry, he can make himself a better farmer than his father. We have taught him practice; we have taught him to observe and draw right conclusions (so far as we have been able) from what he sees; now what we want is to educate him for his future work, and we have made money enough to pay his expenses. We commit him to the agricultural college. We maintain his home interest and give point to his studies by encouraging him to examine our home practice, as he goes along, with all the truths of science which he is taught. We make him constantly feel that he is the agent of the home concern sent abroad to gain light to improve it. We reason with him, and, so far as important matters are not risked by what may be his immature conclusions, we conduct judicious experiments to prove the truth and application of his conclusions. We do a hundred things which we cannot describe, for the express purpose of holding his home interest and showing him the opportunity which the farm outtholds for the enlistment of his best efforts. We get him back again at the end of his course, not wiser than Solomon, but with a fund of facts and with a knowledge of the true scientific method to apply to all our future inquiries, which, perhaps, enable us to improve our practice a little; and as we work along we find that his training is a constant help in that he has learned to observe and investigate, and believes that no theory is worth consideration which is not the logical

outgrowth of observation, experience and experiment.

Let us take another case, and we want to outline it very briefly: Our boy has reached his 17th year, living upon a stock ranch. We have held to the belief that the talk of improvement in farming was all nonsense. We have shown our son by our words and actions that there is nothing in the business which we did not learn before he was born. When his young, eager mind has shown signs of splurging into the unknown we have given him a good hard job of work to take the conceit out of him. We never have seen any use of encouraging him in idleness by talking about work and ways and reasons for doing it. We have shown him how and that is enough. He is smart and ambitious and we send him away to school. He gets an idea of the rush and the progress which is apparent in all other occupations but that of his father. We are proud of the progress he makes in his studies and we are determined that he shall go to the highest institution in the State. We would like to have him come back to us and take charge of the farm and be the representative man in the neighborhood. He never comes. No institution, existing or conceived of, can make a farmer out of a boy with such a history.

There are boys, not farmers' sons, and who have no knowledge of farm practice, whose parents would like to educate for agriculture. Here is one, for instance. He hardly knows a milk stool from a saw buck. He cannot plow, nor milk, in fact the simplest operations of the farm are beyond his knowledge. The place for such a boy is not in an agricultural college until he has mastered these preliminary details of the business. He should be put upon a farm. No school which can be planned can teach the details of farm work so well as they can be learned upon the farm, nor so cheaply. If we have a green boy of this description, whom we wish to transform into an educated farmer, we should seek out some progressive man, whose ideas of farm work and its possibilities are like those we described in the first instance, and we should prevail upon him to let our son work with him for his board, believing that such a man would not only teach him the facts which are needful, but would foster in the young man the desirable disposition, would imbue him with the true spirit of agricultural progress, and would teach him to observe and to think earnestly of what he sees. After this apprenticeship is reasonably complete, and the young man wishes to follow the calling because he believes in it, we should entrust him to an agricultural college, feeling sure that able and enthusiastic professors could well hold a mind and interest which is thus prepared for them.

Our course with a young lady would be similar. Gain access for her to the elementary practice, either in fruit growing, poultry raising or dairying by actual contact with the work on a ranch. Then if her interest can be enlisted and her tastes awakened (and she does not marry somebody in the meantime), let her attend the regular courses in an agricultural college and she will gain new facts and reasons for her simplest operations which she had not dreamed before.

We believe that our correspondent's protest against excess of text books and forms are warranted in a general way, and we believe, also, that the tendency of the time is toward more concrete and inviting methods of instruction. We believe that the elements of the sciences which underlie agriculture should be taught in the lower schools, because they are an essential part of the preparation for all higher training. They are as inviting as they are valuable. As soon as they are more generally introduced, and when the home training is more generally toward the farm than away from it, we shall have full classes in our agricultural colleges and a cloud of "educated farmers" returning to the farm at each commencement day.

VALUABLE AUSTRALIAN GRASSES.—All our readers who are on the lookout for grasses which might be with advantage introduced to enrich our store of forage plants, will read with interest the letter from Dr. Curl, of New Zealand, which is printed upon another page of this issue. Dr. Curl has undertaken many investigations to prove the practical value in New Zealand of a great many indigenous Australian grasses, as his letter shows. His communication, and others which we hope to receive from him, will extend the value of his researches to California, and his exchanges of seeds with some of our leading experimenters will furnish material for supplementary local statements concerning the plants which he describes. This will in the end be productive of great good. We have within our great State conditions favorable for the growth of a great proportion of the valuable plants and trees of the whole world. Every movement which undertakes the introduction and trial of promising growths is praiseworthy. There should be a comprehensive work of this kind undertaken by the State, but in the absence of this there should be many individual efforts made toward the same end. We are always glad to forward these efforts in every way we can, and we have an outstanding invitation to all importers and experimenters to communicate their achievements to the RURAL PRESS, so that all may profit by the labor of each.

ON FILE.—"Apricots for Name," J. S.; "Women's Rights," J. T.

Continued from page 49.

comes on, the ostrich farmer must turn mid-wife and delicately assist the young one to open its shell, having certain instruments for the purpose. And when he has performed his obstetrical operations he must become a nursing mother to the young progeny, who can by no means walk about and get his living in his earliest days. The little chickens in our farm-yards seem to take the world very easily; but they have their mother's wings, and we as yet hardly know all the assistance which is thus given to them. But the ostrich farmer must know enough to keep his young ones alive, or he will soon be ruined; for each bird when hatched is supposed to be worth \$50. The ostrich farmer must take upon himself all the functions of the ostrich mother, and must know all that instinct has taught her, or he will hardly be successful.

"The birds are plucked before they are a year old, and I think that no one as yet knows the limit of age to which they will live and be plucked. I saw birds which had been plucked for 16 years, and were still in high feather. When the plucking time has come, the necessary number of birds are enticed by a liberal display of mealies—as maize or Indian corn is called in South Africa—into a pen, one side of which is movable. The birds will go willingly after mealies, and will run about their paddocks after any one they see, in the expectation of these delicacies. When the pen is full, the movable side is run in, so that the birds are compressed together beyond the power of violent struggling. They cannot spread their wings, or make the dart forward which is customary to them when about to kick. Then men go in among them, and, taking up their wings, pluck or cut their feathers. Both processes are common, but the former, I think, is most so, as being the more profitable. There is a heavier weight to sell when the feather is plucked; and the quill begins to grow again at once, whereas the process is delayed when nature is called upon to eject the stump. I did not see the thing done, but I was assured that the little notice taken by the animal of the operation may be accepted as proof that the pain, if any, is slight.

"The feathers are stored in the feather room on racks, as shown in the engraving. The feathers are sorted into various lots; the white primary outside rim from under the bird's wing being by far the most valuable—being sold at a price as high as \$125 a pound. The sorting does not seem to be a difficult operation, and is done by colored men. The produce is then packed in boxes and sent down to be sold at Port Elizabeth by auction."

The large engraving on our first page shows how the birds are herded and corralled. The birds run in large enclosures. The one where our view is taken is 3,000 acres, with a troop of 240 birds in it. Here, once a week, they are all hunted up by men on horseback, armed with large boughs of thorn, to keep the birds off, as naught are very savage, and their kick is dangerous. One man will be observed in front, with a pack horse, loaded with Indian corn, to lead them.

The incubating room, as shown in the engraving, is located in a large building so constructed as not to be affected by change of weather. Here several incubators are at work; in one an egg can be seen just broken through. On the top of the machines are the birds' sleeping places, all heated. The drawers are represented as when lowered and drawn out, to show them; when again pushed in, they are lifted and fastened by large screws beneath them.

In another cut Mr. Douglass is represented in the act of helping a weakly bird out of its shell. By certain signs discovered by himself it can be told to an hour when the bird is ready; but it often happens that the bird cannot pierce the shell, and unless helped would die.

Tea and Silk in the Southern States.

Tea and silk, these old "great expectations" of California agriculturists, upon which many words and much time and money were bestowed a few years ago, are now coming forward with modest and yet confident mien in the Southern States. We have never lost complete hold of them, for we have tea plants growing and silk worms munching in different parts of the State. We seem, however, to be resting on our oars after our grand spurts, waiting for others to bump on the rocks and show us the channel. General Le Duc, Commissioner of Agriculture, is confident of tea by the American method which will do away with the Asiatic processes by hand labor, simplify the manufacture, so that machinery can do the greater part of it, or distribute the production, so that tea can be made in farm-houses in all regions where the plants will flourish. Mr. Aiken, of South Carolina, recently visited the Commissioner, and gives the Charleston News notes of his visit. Among other things, the Commissioner said: "There is a sample of American tea, forwarded to me from Georgia. I don't think the flavor and quality of this tea needs any commendation from me. You will see by this letter it has been prepared very simply, without rolling the leaves, which labor is not necessary. It is something worth knowing that tea of this quality can be grown and manufactured on your Southern coast." Of this Georgia grown tea, a Baltimore firm, who for three generations have

been dealing extensively in China and Japan as tea merchants, said: "We have received a sample of tea from a lady in Georgia, the only trouble with which was in the curing. It just

worth about \$6.50 an ounce, or \$1 per 100. He thinks that the cost of silk culture per acre would be about the same as that of cotton, and estimates the product at from 150 to 200

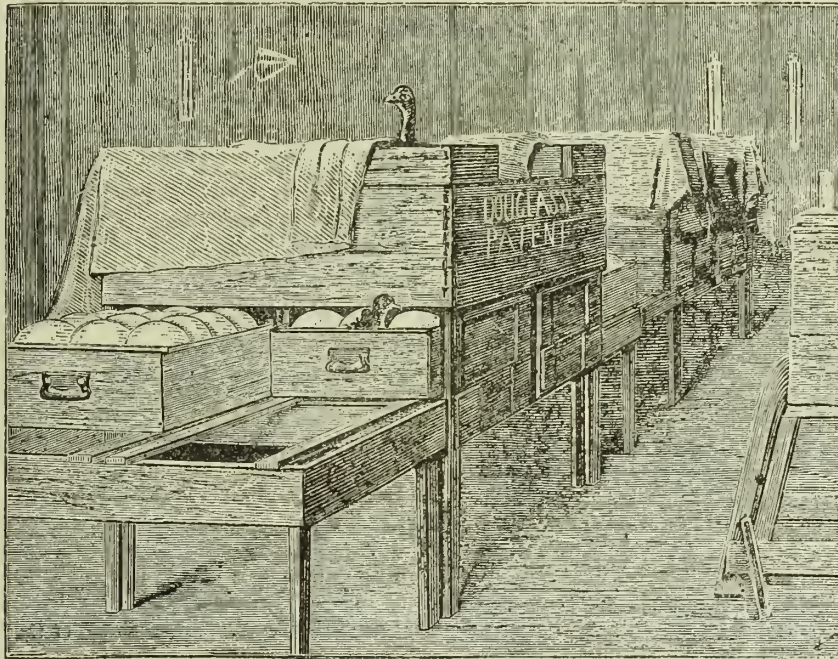


ASSISTING WEAK BIRDS FROM THE SHELL.

missed being a tea that would have excelled any from China, and equaled any from India, which it so closely resembled."

So much for tea. Alabama is the latest as-

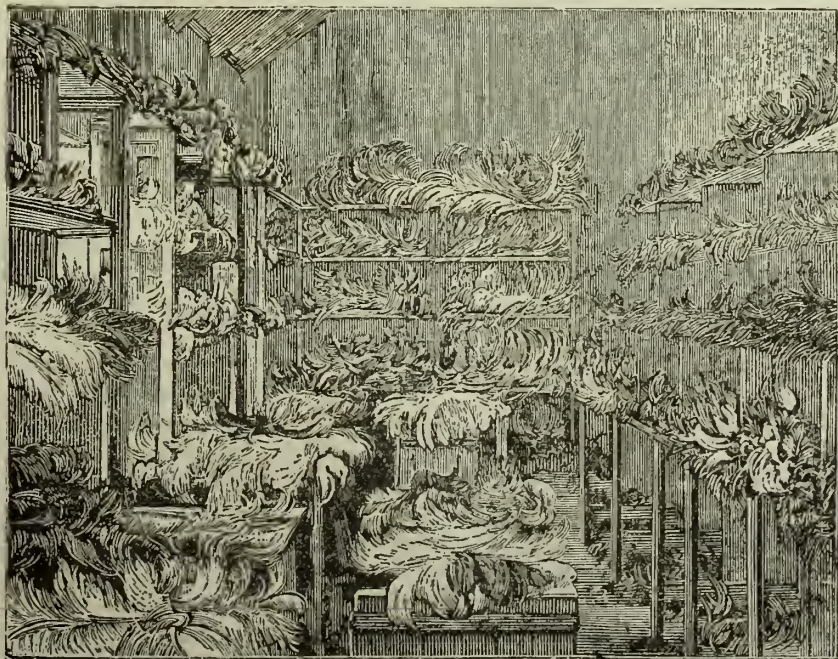
pounds of silk per acre, worth from \$4 to \$6 per pound. Mr. Lowery is the principal of a colored school at Huntsville, Ala., and seems to have prosecuted the enterprise with a view



THE INCUBATOR ROOM AT MR. DOUGLASS' FARM.

pirant on the silk tapis. It seems that the existence of an "industrial academy" hangs upon the success of her silk experiments. We read that three years ago Mr. Samuel Lowery, a

to test its practicability. Among those who have taken an active interest in the introduction of the silk-worm culture is one of the antebellum governors of the State, Reuben Chap-



APARTMENT FOR SORTING AND STORING PLUMES.

colored lawyer of Huntsville, Ala., commenced the raising of silk-worms, which proved very healthy. Mr. Lowery has now a number of mulberry trees planted, and has had for sale last spring from 4,000,000 to 5,000,000 of eggs,

man, on whose estate Mr. Lowery's Industrial Academy is situated. This gentleman has granted a lease of 25 acres of suitable land on which are valuable buildings, and as a proof of his earnest desire to advance the interests of

the colored people of his section, Gov. Chapman has offered to make a gift of the land and buildings to the industrial academy, on condition that the promoters of the enterprise succeed in obtaining an endowment equal in value to the lands and buildings which he proposes to present to them. We hope Huntsville will secure its endowed academy and the silk experiment prove so successful that all the boys shall have silk hats and the girls silk stockings.

Samuel Chamberlain writes to the Polytechnic Review, concerning a plan of a silk school, farm and village about 30 miles from Philadelphia. He believes that the failure to introduce silk culture in 1840 was chiefly due to the want of perseverance. The three years of actual trial (for the rest was only speculation in trees) were not sufficient to carry it on to success. Business, like machinery, must be carried over the dead-points. A school, farm and village, whose continuance will be maintained for some 16 to 20 years, will secure a permanent source of knowledge, example and instruction from which the culture will extend year by year. It will not be overthrown, as formerly, by causes outside of the silk business. It will keep the subject before the public through advertisements. It will at all times provide eggs, trees, books, etc. The educational advantages will be very great. We are now endeavoring to introduce the industrial schools of Europe for instruction in the mechanical arts. But they have possessed silk schools for nearly 100 years; through them have obtained and retained till now the silk business of the world! It is more than strange that such schools, urged by M. D'Hormegue in 1835, should not have been long since established in this country. The present effort ought to have the immediate support of every intelligent and far-sighted capitalist; for through it we shall draw the silk business of the Western World to ourselves.

QUERIES AND REPLIES.

Diseased Almond and Apricot Trees.

EDITORS PRESS:—I have just read Mr. Nunnally's question and your remarks on the cicadian fly, and it occurred to me that's what's the matter with our almond trees. About two months ago they commenced dropping their leaves, and one, I noticed at that time, was dying at the top of one branch. I examined the leaves. I found them full of black specks, as though they had been stung by some insect. We have almonds, apricots, peaches, figs, etc., all planted and mixed up in the same field. I was looking at them to-day, and find quite a number of the almonds badly affected, and some of the largest and thickest at that. At first it seemed to be only the small ones. None of the other varieties are injured much, although the peach and apricot leaves are somewhat speckled. I could not find the fly.

Some two years ago, I wrote you in relation to apricot trees dying from knotty or knurled roots. One of mine died. The others I found with knots. I took the chisel and chipped a part of the knot off. This year the trees are very thrifty, made a big growth and produced a heavy crop of beautiful fruit. I concluded the remedy saved them.

We are having the coolest season for the past eight years, so far, foggy overhead most all of the time, and, many mornings, dews, which cause our grain to rust and our grapes to mildew; does it not? S. WHITMORE, San Diego, Cal.

This piercing of leaves does not agree with the known habits of the cicada. They work chiefly upon the stems of plants and the twigs and branches of trees. More than this, with the markings so abundant and indicating numbers of the insect present, our correspondent would not fail to find the large cicada or some of his moulted shell clinging to the twigs. The cicada are about an inch in length and are not at all obscure, as those who have been visited by them can witness. If the specking of leaves and dying of twigs' ends be the work of an insect, it is probably a much smaller pest than the cicada. Please send us some of the leaves and twigs, rolled in damp moss or something else to preserve them moist, and we will see what the microscope can tell us of the cause.

It is quite likely that the chisel did good service with the diseased apricot roots. We have heard before of good results following the chipping of excrescences of this kind, but our knowledge does not amount to a demonstration that this was the cure. We should recommend the chiseling, however; there is *prima facie* evidence in its favor.

Heat and excessive moisture are generally favorable to fungus growths. Doubtless the cool weather which our correspondent notes was not cool enough to restrain this growth, and his surmise as to the cause of the prevalence of rust and mildew is probably the correct one.

A Bean Harvester Wanted.

EDITORS PRESS:—There are growing upon this rancho and its adjacent border not less than 2,500 acres of beans. To harvest this large amount in the short time between bean ripening and when rains may be expected, would require a small army of men if the usual method of hand-picking was resorted to. Is there not some machine already invented that would either cut or pull and thereby facilitate the harvesting? If not, some inventor should endeavor to supply such a patent need.—G. W. RICHARDS, Lompoc, Santa Barbara county.

SUMMARY PUNISHMENT.—A dispatch from St. Paul, Minnesota, July 23, says: A report was received to-night from Faribault that a farmer residing near that point shot and instantly killed two tramps whom he caught in the act of firing his harvesting machines. He surrendered himself, and was instantly released.

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Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent free on request.

Send stamp for price list. Address

M. EYRE, Napa, Cal.

EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

DALTON & GRAY,
Commission Merchants,

WHOLESALE DEALERS IN

All Kinds of Country Produce.

404 & 406 Davis Street, San Francisco.

Consignments Solicited

C. & F. NAUMAN & CO.
Wholesale Commission Merchants,

ALL KINDS OF

Farm and Dairy Produce Sold on Commission. Butter, Eggs, Poultry and Game a Specialty.

231 WASHINGTON STREET, San Francisco

(Between Front and Davis)

CHAS. NAUMAN.

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DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce.

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

BEE RANGE FOR SALE.

One of the best ranges in the State. At present working 375 stands Italian Bees. Apply for particulars to

D. W. McLEOD,

Riverside

GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875.

Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).
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SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

THE EASTERN OREGON COLONY

Have located in Grass Valley, Wasco County, on the line of the Dalles Military Road, 20 miles from the Columbia River, between the Deschutes and John Day Rivers; 31 miles from the Dalles.

THE TOWN SITE

Is located on a small stream, fed by numerous springs, in the center of a beautiful rolling prairie, 50 miles long by 30 miles wide, of the very richest soil, heavily covered with fine bunch grass.

A Plenty of Government Land for All.

The climate is (unlike Western Oregon) dry and delightful, all kinds of Grain, Fruit and Vegetables, etc., grow in perfection. Average wheat crop—46 bushels per acre.

640 Acres Secured for a Town-site and Called Lockville.

NO LIQUOR SALOONS OR CHINESE ALLOWED.

Hotels, Stores and a large number of Houses already in course of construction. Immigrants will do well to look at this location before going further north.

A Stage will soon leave the Dalles, (from the Pioneer Hotel,) daily for Lockville.

EASTERN OREGON COLONIZATION COMPANY.

DR. C. R. ROLLINS, Pres.

J. B. DOW, Treas.

G. M. LOCKE, Sec'y.

IRA MARDEN & CO.'S

BRANDS OF

Coffee and Spices Have no Superior.

Twenty-Five Years Experience

IN THE BUSINESS ON THIS COAST ENABLES THEM TO PLACE ON THE MARKET THE VERY BEST GOODS AT THE LOWEST POSSIBLE PRICES.

Ask Your Grocer for Marden's Coffee and Spices.

Grangers' Bank of California,

42 California Street,

SAN FRANCISCO CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

ALBERT MONTPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

DIVIDEND NOTICE.

The German Savings and Loan Society.—For the half year ending June 30, 1878, the Board of Directors of the German Savings and Loan Society has declared a dividend on Term Deposits at the rate of eight (8) per cent per annum, and on ordinary deposits at the rate of six and two-thirds (6 2/3) per cent per annum, free from Federal Taxes, and payable on and after the 15th day of July, 1878. By order.

GEO. LETTE, Secretary.

DIVIDEND NOTICE.

San Francisco Savings Union, 532 California street, corner Webb.—For the half year ending with June 30, 1878, a dividend has been declared at the rate of eight (8) per cent per annum on term deposits and six and two-thirds (6 2/3) per cent per annum on ordinary deposits, free of Federal Tax, payable on and after Tuesday, July 16, 1878. By order.

LOVELL WHITE, Cashier.

BEES! QUEENS!! HIVES!!!

Choice imported Italian Queens, from best districts in Italy, \$7 each. Tested Italian Queen Bees, from selected mothers, \$3. BEE-KEEPERS' TEXT BOOK, just issued after being thoroughly rewritten and enlarged, now forms the only standard work on apiculture, price, paper cover, 60 cents; muslin, \$1.25; old edition, 40 cents. Quinby, \$1.50; "Langstroth on the Honey Bee," \$2. Other works on apiculture and agriculture for sale at publishers' prices. Bee-keepers' Magazine, \$1.50 per annum. King's New Bellows Smoker, for subduing bees, by mail, \$1.25. Hives and other bee-keepers' supplies for sale. For particulars, address

W. A. PRYAL, Oakland, Cal.



S. D. BURBANK, OPTICIAN,

Special Attention to Fitting Eyes.

OFFICE—NICHOLL BLOCK, NINTH STREET,

(BETWEEN BROADWAY AND WASHINGTON.)

OAKLAND, CAL.

The Agents of this Paper and some of the Best and most careful Railroad men carry

NEW YORK WATCHES.

NONE ARE BETTER. Prices reasonable. Ask your Jeweler about them. Buy them of Geo. W. Finck, N. W. corner of Kearny and Geary Sts., S. F.

The Mining & Scientific Press,

Is the leading mining journal in America, and it enjoys a large circulation among the more intelligent operators and workers in the gold fields of the world.

As a scientific and mechanical representative of the Pacific Coast it is decidedly popular, and is a standard journal with the most thrifty industrial people of the Pacific States and Territories. Its authority is of the highest order, and its usefulness in its special sphere unrivaled.

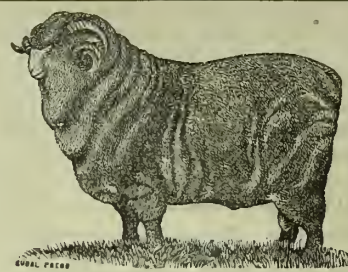
Every public library, mining engineer, metallurgist, mining operator and intelligent mechanic and manufacturer will find profit by its reading.

Subscription, postage prepaid, \$4 a year in advance. Sample copies, post paid, ten cents.

DEWEY & CO. Publishers, S. F.

25 Styles of Cards, 10c., or 10 Chromo Cards, 10c. with name; Outfit, 10c. J. B. HURSTED, Nassau, N. Y.

Stock Notices.



SPANISH MERINO SHEEP.

Guaranteed of pure blood and free from scab. Purchasers are invited to examine. About 10 minutes' walk from the Railroad, adjoining State University.

E. W. WOOLSEY,
Berkeley, Alameda County, Cal.

BERKSHIRES.



Breeder and Importer of the "Crown Prince," "Sambo," and "Bob Lee" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.

PETER SAXE, Russ House, San Francisco, and Los Angeles City, Cal.

\$25 EVERY DAY Is warranted using JILZ WELL AUGERS and DRILLS. Took the first premium at the Great Exposition. They bore any diameter and depth; 100 feet a day, through earth, sand or rock. Pictorial anger book free. Address Col. PETER SAXE, Los Angeles, Cal., Agent for Pacific States.

THOROUGHbred
SPANISH MERINO SHEEP!

200 Extra Rams

For sale. Yearlings and two-year-olds. In size, quality and condition unsurpassed. Also, 100 ewes at prices to suit the times. The nucleus of this flock was from a purchase made from Severance & Peet in 1873. My ranch is at Haywards, Alameda county, and may be reached by rail from San Francisco, seven times daily. Parties desiring choice sheep should see this flock before purchasing elsewhere.

J. H. STROBRIDGE.

CHOICE PIGS FOR SALE.

I have a few fine Lancashire pigs for sale, now about four weeks old. Bred from choice imported stock. Address

GRANT I. TAGGART,

Eighth Street, near Broadway, Oakland

FARMERS, ATTENTION!

CROSETT & CO.,

Employment Agents,

Nos. 623 & 625 CLAY STREET.

The Pioneer Office of San Francisco, Established in 1857

A personal experience of over ten years, and an extended acquaintance with the wants of employers and employees of the Pacific Coast, give us facilities not easily acquired for meeting the requirements of the public in every department of labor. Special attention given to procuring farm help of every kind, both male and female; experienced men for farm machines; MILKERS, BUTTER AND CHEESEMEN, MILLMEN, BLACKSMITHS, CARPENTERS, WHEELWRIGHTS, QUARRYMEN, SHEEPHERDERS, ORCHARDMEN and GARDENERS.

We take special pains also to furnish the best of SCANDINAVIAN, GERMAN, FRENCH and IRISH DOMESTICS. Gentlemen connected with the office, and speaking these languages, give us extended acquaintance with this class of help, and enable us to furnish the best to be had in San Francisco at very short notice. All orders promptly attended, free of cost to the employer. Address by letter or in person,

CROSETT & CO., 623 and 625 Clay St.

Calvert's Carbolic
SHEEP WASH,
\$2 Per Gallon.

After dipping the sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

THE CAPITAL WOOLEN MILLS,

248 J STREET,

SACRAMENTO, CAL.

HAND PRINTING PRESS WANTED.—Parties having a second hand Washington or other hand printing press which they wish to dispose of, will please address this office stating price, size and condition.

Notices of Recent Patents.

Among the Patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

TRUSS.—Deveron & Lachman, S. F. The improvement consists in forming the pad which presses against the rupture with a flat face and with the sides raised and curved, so as to inclose and hold in place a dished metallic plate, which forms the back. On the back of this plate is pivoted a peculiar fastening, so arranged that the waist or body-belt to support the truss may be attached to it at several different places either way from the center, and, as the fastening is itself pivoted, the pad may accommodate itself to any angle or position that suits the wearer. The dished plate forming the back of the truss has holes in its crown, so that when the rupture presses on the flat surface of the pad and presses it inwards, the air between the inner surface of the pad and plate may be expelled through these holes. As soon as pressure is withdrawn, the elasticity of the pad brings it back to place, thus pressing the rupture back. The air then enters the cavity of the truss through the holes in the plate and the pad acts as a cushion on the rupture. At one end of the side of the pad is an opening, through which projects the stud over which the buttock-belt is fastened, and as this buttock-belt holds that end of the truss in position and the waist-belt holds it up, the truss is held securely in place, while at the same time it will accommodate itself to any pressure that may be brought upon it.

HAY PRESS.—Jacob Price, San Leandro. The object of this invention is to provide a machine for baling hay, in which the hay or straw can be fed continuously into one end of the machine, compressed into one single continuous bale as it passes through the machine, and cut off into proper sized bales at the opposite end of the machine, thus forming a continuously operating hay press. The machine is operated horizontally in order to avoid lifting the hay or straw to any considerable height, and the facilitating of feeding it into the end of the machine, although it may be operated in a vertical position if preferred.

WARDROBE OR CLOTHES GUARD.—S. F. This invention relates to a novel construction for a clothes guard, which may be both fixed and portable, and it consists in the formation of a prismatic frame having a finished front and door, so that the device may be fitted into the corner of a room and form a complete wardrobe, of which the walls of the room form the sides. A receptacle is formed in the corner part, and is provided with a peculiarly-constructed door, which may be adjusted to fit any form or depth of hase board which may surround the room.

OLIVE OIL.—The *Alta* says: We have received samples of filtered and unfiltered olive oil, made by Elwood Cooper, in Santa Barbara county, and find them both palatable. The filtered article is clear, very light in color, thin in fluidity, pure and rich in flavor. It is decidedly better than fine qualities of Italian oil of excellent brands, but whether this is owing to the age of the foreign oil, its exposure to high heat in the tropics, the inferiority of the fruit from which it is made or the unclean methods of manufacture, we are unable to determine. Half a dozen persons, accustomed to good oils from Italy, agreed, after trial, that this from Santa Barbara is better.

SACRAMENTO SEMINARY.—We have received a neat circular announcing the opening of the new school year at Sacramento Seminary, a long established and well known institution, of which Mrs. Hermon Perry is principal. The Seminary we notice retains all the good points upon which it has made its record, and announces that the department of instrumental music has been placed under the direction of John P. Morgan, founder of the Musical Conservatory of Oakland, and formerly organist and conductor of the orchestra in Trinity church, New York. The new term will open August 5.

HAY IN AMADOR COUNTY.—A Mr. Dawson, living near Lone City, Amador county, cut six tons and 400 pounds of barley hay from one acre of land this year. This is full twice the yield from the same quality of land by the ordinary methods of cultivation. The ground was prepared and seeded in the best manner possible, for the purpose of determining the difference in yield between the ordinary methods of plowing and sowing and a more thorough preparation of the land.

EIGHTEEN MEASURED TONS OF INSECTS.—By the ship *Young America*, for New York, California will lose 18 tons (by measurement) of insects. This is the amount of space required for the shipment of the entomological collection of Henry Edwards, Esq. It was packed in 830 boxes and these enclosed in 36 outer cases. Thus a scientific collection, which might have been made of great practical value on this coast, is permitted to go away to enrich some Eastern museum.

Pioneer Box Factory of Cooke & Son, Sacramento.

EDITORS PRESS:—Among the manufactories visited in the city and interior of the State by your correspondent worthy of notice is the Pioneer Box Factory, Sacramento, Cooke & Son, proprietors. It is fitted up with all the latest improved machinery for box-making, and does an excellent business. They supply fruit shippers for the Eastern market, and will supply this year seven-eighths of the whole Eastern trade. They will use about a million and a half of fir lumber this season, and carry a stock of 75,000 boxes ready cut.

I noticed a stencil press made by Tait & Hanguet of your city, which the proprietors of this establishment have worked to get to perfection from zincograph plates made by M. Schuwar & Co. of your city. Printing in colors on wood is done here perfectly. First the business card of the firm 16 by 14 inches is done in four colors by four plates: yellow, red, blue and black, and looks excellently. The stencil of M. T. Brewer & Co. is in four colors—red, orange, green and blue, and they have from 15 to 20 various other stencils of business firms in Sacramento and vicinity, the number increasing each week, as the new stencils are circulated abroad. The press was timed by your correspondent, and was printing at the rate of 950 per hour, attended by two boys. Messrs. Cooke & Son is the only firm in the State that has first brought out these new plates, showing what energy and zeal is manifested by our Sacramento factories to improve the old style of stenciling.

The firm also show a device for fastening box and chest covers, without nails, lock or bolts, which will be introduced by this firm at a nominal cost as soon as they can get the castings from the East which are now ordered.

They have also a new style of crate for shipping grapes East, which we have heard shippers pronounce the best that has been offered as yet. The crate is made to carry eight five-pound baskets of grapes, which are placed four in the bottom, then a slat partition or middle bottom is put over the lower tier, resting in a slot in one end and a circular cut in the other, which prevents the slats from moving in any direction, also allowing a free circulation of air throughout the crate. Brewer & Co. have ordered 5,000 of these crates for Eastern shipment.

Messrs. Strong & Co., who are doing a large shipping business throughout the State and adjoining ones, also to the Eastern market, are using our boxes for the trade.

The number of men employed by this firm is about 30 at present in Sacramento, and five at New Castle, Placer county, they having cut the stock last winter, therefore having a large supply on hand.

The lumber used by this firm is from Emigrant Gap, Alta, Colfax and Nevada City, on the C. P. R. R., and from Sesina and Red Bluff on the Oregon road, also a supply from El Dorado county on the Sacramento Valley road. From the proprietors I learned that for the spring crop in this vicinity asparagus was good; berries were about equal of last year; peaches, apricots and plums a fair crop considering the damp season; apples fair but many wormy; Bartlett and other pears excellent, with a splendid crop of grapes. The Eastern shipment of pears commenced this week, Brewer & Co. shipping one car of Bartlett's to Chicago, one to New York, and Porter Bros. one to Chicago and five cars will be shipped the coming week. Messrs. Strong & Co. shipped a carload to Denver. Your correspondent recommends fruit growers visiting Sacramento at the coming fair to call at this establishment and examine for themselves. The proprietors will be happy to give any information in their line of business that may be asked for.

Sacramento, July 12th.

GEORGE RICH.

THE MECHANICS' FAIR.—The Thirteenth Industrial Exhibition, under the auspices of the Mechanics' Institute, will open in this city on August 13th. This Fair is always the best one on the Coast, and the manager this year promises many new features. As the exhibition each year has eclipsed former ones in attractions, the coming one will, without doubt, be of greater interest than those preceding it. The space has nearly all been applied for already, so that the success of the exhibition is insured. Dewey & Co., proprietors of this journal, have been granted exclusive advertising and printing privileges, and will publish the ninth volume of the *Mechanics' Fair Daily*, a journal devoted to the interests of the Thirteenth Industrial Exhibition. It will be of large size, printed and circulated free in the Pavilion, and contain the day and evening programme, a list of exhibits, and official bulletin of the Institute. Its columns will embrace a large variety of important industrial and scientific information, illustrations and well-written descriptions of the general features and most deserving and novel exhibits in the Fair.

THE FIRST FRUIT OF THE SEASON IN NEW YORK.—We read in the N. Y. *Evening Post* of July 15 that "the first car load of Bartlett pears from California arrived this morning. It is from the orchard of C. W. Reed, Sacramento, and is consigned to Davis & Sutton, 75 Warren street, this city."

The Fair Season.

The following is a partial list of the coming fairs. We shall be pleased to add to it if readers will send us the dates and locations of their respective exhibitions:

San Francisco Mechanics' Institute, San Francisco, August 13th to September 14th.
California State Agricultural Society, September 16th to 21st, inclusive.
Oregon State fair, at Salem, October 8th to 18th, inclusive.
Nevada State Agricultural, Mining and Mechanical fair, at Reno, October 7th to 12th, inclusive.
Montana Agricultural, Mineral and Mechanical fair, at Helena, September 23d to 29th, inclusive.
Sonoma and Marin district fair, at Petaluma, September 23d to 25th, inclusive.
San Joaquin valley district fair, at Stockton, September 24th to 28th, inclusive.
Northern district fair, at Marysville, September 23d to 25th, inclusive.
Golden Gate district fair, at Oakland, September 9th to 16th, inclusive.
Napa and Solano district fair, at Vallejo, September 3d.
Monterey county district fair, at Salinas City, October 15th to 19th, inclusive.
Siskiyou county fair, at Yreka, October 2d to 5th, inclusive.
El Dorado county fair, at Placerville, September 13th to 15th, inclusive.
Santa Clara valley fair, at San Jose, September 30th to October 5th, inclusive.
Stanislaus County Stock Growers Fair, at Modesto, October 9th to 11th, inclusive.
Southern California Horticultural Fair, at Los Angeles, October 14th to October 19th, inclusive.
Southern California Agricultural Society's Fair, at Los Angeles, October 14th to October 19th, inclusive.

NARCOTICS AND STIMULANTS.—Mr. Jez. Keel-grew, Commissioner of Agriculture in Tennessee, has published some interesting statistics as to consumption of narcotics and stimulants throughout the world. Paraguay tea, it is computed, is used by 10,000,000 human beings, cocoa by 60,000,000, chicory by 40,000,000, and coffee by 100,000,000. The consumers of betel are set down at 100,000,000, those of hashish at 300,000,000, and those of opium in one or another form at 400,000,000. These figures are, however, eclipsed by the proportions of the demand for Chinese tea, which is said to be used by half a billion; while the consumers of tobacco are not only still more widely distributed, but present the astonishing aggregate of 800,000,000. According to a careful estimate prepared for this report, tobacco is more generally used than any other single article of commerce consumed by man. The United States in 1860 produced more than 430,000,000 pounds of tobacco, but ten years afterwards the yield of the plantations had dwindled down to 260,000,000. The report does not state the exact quantity grown in any subsequent year; but it seems that the exports alone in 1875 reached about 220,000,000 pounds, valued at more than \$25,000,000. According to the United States Bureau of Statistics, leaf tobacco valued at nearly \$20,000,000 was sent out of the country in the year ending June 30, 1877. These figures would make tobacco rank sixth in the list of exported staples from the United States, cotton, breadstuffs, petroleum, and the precious metals alone exceeding in importance. In 1875 the best customers of the United States for tobacco was Germany, who, notwithstanding the large quantity grown in Prussia, took 56,000,000 pounds; while Great Britain, which produces none, took only 54,000,000 pounds.

LUMBER INTERESTS FOR SALE.—An advertisement in another column announces that the Duncan's Mills Land and Lumber Company offer for sale their fine property in Sonoma county. There is also for sale a lumber yard situated on the bay of San Francisco, and on the line of the C. P. R. R. This property is well worthy the consideration of investors, and all interested should apply to Mr. Byxbee for full particulars.

"KIRKLEINGTON PRINCE."—Mr. Robt. Ashburner has sold to the estate of Thos. S. Page his young princess bull, 15 months old. He is a deep red, sired by "Kirklevington Duke, 2d," 5,368, S. H. R.; out of "Dame Gwynne" by "Waterloo Cherry" (27,763), etc. The youngster has been named "Kirklevington Prince," and takes his place as head of the herd on the Cotate ranch, Sonoma county.

Woodward's Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a boa-constrictor have just been added. New stars are constantly engaged for the Pavilion exercises. Rates of admission as usual.

Mr. W. J. Woodley, who took out a Canadian Patent some four years ago, is requested to call at the MINING AND SCIENTIFIC PRESS PATENT AGENCY OFFICE. Business of importance.

Signal Service Meteorological Report.

Week Ending July 23, 1878.

HIGHEST AND LOWEST BAROMETER.						
July 17.	July 18.	July 19.	July 20.	July 21.	July 22.	July 23.
29.93	29.95	29.91	29.95	29.94	29.90	29.95
29.93	29.90	29.84	29.84	29.88	29.92	29.92
MAXIMUM AND MINIMUM THERMOMETER.						
64	62	63	65	65	62	62
57	55	53	53	* 54	54	54
MEAN DAILY HUMIDITY.						
80.7	85.7	84	79	78	79.7	74.3
PREVAILING WIND.						
W	W	SW	W	SW	SW	SW
WIND—MILES TRAVELED.						
249	275	267	265	239	275	297
STATE OF WEATHER.						
Fair.	Fair.	Fair.	Fair.	Fair.	Fair.	Fair.
RAINFALL IN TWENTY-FOUR HOURS.						
.01						
Total rain during the season, from July 1, 1878, .01 in.						

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 24th, 1878.

Trade is showing signs of awakening. Grain is arriving more freely and charters are beginning to be drawn. The fruit season is at its height and the canneries are running with full hands.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday.....	108	@108	3d	108	3d@108	8d
Friday.....	108	@108	3d	108	3d@108	8d
Saturday.....	108	@108	3d	108	3d@108	8d
Sunday.....	108	@108	3d	108	3d@108	8d
Tuesday.....	108	@108	3d	108	3d@108	8d
Wednesday.....	108	@108	3d	108	3d@108	8d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1876.....	98	9d@108	1d	108	@108	5d
1877.....	128	2d@128	5d	128	5d@138	—
1878.....	108	@108	3d	108	3d@108	6d

The Foreign Review.

LONDON, July 23.—The *Mark Lane Express* says: Crops are ripening rapidly under the brilliant sunshine. A continuance of such weather as we are now experiencing will go far to repair the injury by prolonged floods in May, except where rain is needed. But to judge from the badly-filled wheat ears which are to be seen in many parts of the country, the yield in these districts will scarcely come up to the average. Wheat-cutting may be expected to commence this week in the early districts, provided the weather continues seasonable. Barley fields present a bleached and unhealthy appearance. Agricultural reports from Scotland are satisfactory. Barley and Oats have vastly improved, and Turnips have thriven even on the poorest soils. Potatoes generally are good, except in Ireland, where the disease made sad inroads on what promised to be heavy crops. The country markets and Mark Lane have been scantily supplied with Wheat, but the continuance of bright weather has caused a relapse. Foreign Barley maintained its currencies, but the trade has not been over-weighted with imports, as Friday's return was under 50,000 quarters. Millers supplied their wants so freely during the previous week that the decreased demand for consumption has been barely sufficient to support the late improvement. Nevertheless, sellers are loth to accept a reduction, in view of the decreased quantity of Wheat on passage and the possibility that American crop reports are exaggerated, so that the week's transactions were not large, although the Continental demand still affords some support to prices. With small arrivals at ports of call, the floating cargo trade was quiet, but the Continental demand continued, and values were fairly supported. Maize is dull and lower. Barley unchanged. Sales of English wheat noted last week were 22,302 quarters at 44s. 5d., against 21,782 quarters at 63s. in the previous year.

Freights and Charters.

The *Call* says: As for some time past, a large proportion of the tonnage arriving is under charter made some time since. The grain crop is coming in slowly, and shippers are not disposed to make new engagements until some of their vessels now loading are dispatched. Of the tonnage here nearly one-half is disengaged. The quotation is still £2 5s. @ £2 10s. for Great Britain. Outside business continues very dull. The ship *Red Cross*, 1,301 tons, and ship *British Army*, 1,338 tons, just in, were chartered previous to arrival for Wheat to Liverpool, the former at £3, and the latter at £2 17s. 6d. The ship *Rajah*, 1,258 tons, has been taken for Wheat to Cork at £2 10s., the first charter for some time. The *Dauntless*, 955 tons, takes Lumber from Puget Sound to Callao, \$13. There are now in port 52,243 tons shipping engaged for Wheat, 11,418 for General Merchandise, and 52,742 tons disengaged. The list of vessels known to be on the way amounts to 223,150 tons.

Eastern Grain Reports and Markets.

WASHINGTON, July 22d.—An official synopsis of crop reports shows the average condition of Rye and Barley at 101%. Oats, general average, 101. Fruit, on the whole, is favorable to such crops as escaped spring frosts. Grass and clover are remarkably fine. The Tobacco acreage reduced 25%. Information received here since indicates very serious damage from various causes to the Spring Wheat crop of Minnesota, northern Iowa and Wisconsin.

LINCOLN (Neb.), July 13th.—The *Nebraska State Journal* to-morrow morning will publish official returns of the acreage of cultivated lands of all the counties of the State, with the yield of all kinds of crops of 1877, which show that over 10,000,000 bushels of Wheat was harvested. It will also publish crop reports of the current week from 50 out of 63 counties, showing that the harvest of this year will be the most bountiful in the history of Nebraska. The Wheat crop will not fall short of 15,000,000

bushels. The corn crop last year was 35,000,000 bushels, and will reach 50,000,000 this year. Oat crop, 6,000,000 bushels. This season the aggregate Barley crop is 3,000,000 bushels; Rye, 1,000,000.

ST. PAUL, July 21st.—Dispatches to the *Pioneer Press* from the heaviest Wheat-growing counties of Minnesota represent a probable loss to the crop from rains and hot weather of from 20 to 40 per cent. In Goodhue, the first county in the State in the amount of wheat produced, the damage from blight is estimated at from 50 to 75 per cent., and many fields will yield five to ten bushels to the acre. The harvest commences to-morrow in many places.

NEW YORK, July 20th.—The grain trade of the week has been exceedingly dull, except in August and September options. The export demand for Wheat has been unusually limited, and at the close the foreign orders had either been withdrawn or reduced. Spring Wheat on spot closes at 98c@\$.10; new crop Winter Wheat sold at 98c@\$.12 for Red, and \$1.06@\$.125 for White. The quality of new Wheat shown is fine. The closing options for Spring are 97c@\$.102 for August, bid and asked. Corn has sold at 40c@47c. Flour has had good sale at full prices, shipping grades fetching \$4@\$.25.

CHICAGO, July 20th.—The grain markets have been only fairly active, but the prices have ranged higher during the week, and Wheat has gone up very decidedly, reaching the highest price to-day. Wheat is now said to be in very strong hands, and symptoms of a decided corner are developing, despite the rules. The Milwaukee members of this combination threaten to put the price of cash Wheat up to \$1.25. The comparatively small receipts seem to be the sole cause for higher rates. August Wheat sold at 84c@87c; August Corn, 37c@38c; August Oats, 22c@22c; Cash Rye, 49c@51c. Barley was very strong, and the "shorts" are being unmercifully squeezed. Prices went up from 48c to 65c this week, and the market closes with the outside bid for cash. Provisions are dull, and show no inclination toward breaking or advancing in price. August Pork sold at \$9.27c@\$.95; August Lard, \$6.92c@\$.97.

Eastern Wool Markets.

NEW YORK, July 20th.—The Wool market is gradually assuming a settled appearance, and less difficulty is experienced in consummation of sales. Eastern buyers are now here in larger number and their mission is apparently for supplies which they seek to obtain at prices which in the end will leave them some margin. Since the opening of the season for Fleeces, prices have steadily advanced to now-current rates, which are, taking Ohio as a basis, 37c@37c for X, 38c for No. 1 and XX, 42c for XXX, pick-lock and delaine, and 46c for medium combing; but the opinion now is that the advance is checked unless there should suddenly arise an active demand for goods, which from present appearances is not at all probable. Spring California moves rather slowly, but with enhanced rates for better grades. Holders are very stiff in their ideas. Texas continues to meet with favor, and though yielding a very small profit to original purchasers, are nevertheless accepted with satisfaction. Transactions for the week are: 35,000 lbs Spring California at 22c@26c; 10,000 lbs Fall do, 11c; 30,000 lbs Western Texas, 15c@17c; 5,000 lbs scoured do, 52c@53c; 13,000 lbs Spring do, 23c@24c; 5,000 lbs low Georgia, 20c; 1,000 lbs new X and above Ohio, 37c; 20,000 lbs old do, 38c; 2,300 lbs Washed State Combing and Delaine, 41c.

BOSTON, July 20th.—In Wool, the transactions of the past week show some falling off from the large business of the two previous weeks, but trade has been good, sales comprising upwards of 2,000,000 pounds, with a prospect of a good demand for the present. There is no change in prices. All grades are held firm and holders are free sellers at current rates. Little more inquiry for fine Fleeces and a good demand for combing and delaine Fleeces. Pulled Wool is very quiet. Sales comprise Ohio No. 1 X and XX at 36c@39c; Michigan, 32c@36c; Wisconsin, 36c; New York, 33c; heavy Vermont X, 31c; washed combing and delaine, 40c@45c; unwashed combing and delaine, 25c@32c; Texas, 17c@27c; scoured, 46c@78c; super and X pulled, 30c@40c. Transactions in California have been the largest for some weeks, comprising 576,000 pounds of Spring at 18c@31c, and 45,000 pounds of Fall at 17c@21c; in all, 621,000 pounds. Business, however, has been largely confined to one house, whose sales in the past week have been 423,000 pounds of Northern and Spring Wool, at from 28c to 30c.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks.

ARTICLES.	WEEK. July 2.	WEEK. July 10.	WEEK. July 17.	WEEK. July 24.
Flour, quarter sacks..	13,503	20,645	28,827	22,300
Wheat, centals.....	53,676	101,305	118,742	235,223
Barley, centals.....	18,157	14,523	19,132	18,757
Beans, centals.....	139	459	218	275
Corn, centals.....	9,796	10,876	1,760	496
Oats, centals.....	6,154	1,550	1,710	1,361
Potatoes, sacks.....	6,747	8,387	13,525	12,001
Onions, sacks.....	673	530	306	330
Wool, bales.....	2,249	2,824	2,770	3,770
Hops, bales.....	42	42	42	27
Hay, bales.....	1,789	1,234	2,416	1,525

BAGS—The combinations in Grain Bags has secured all outside lots and is putting on the screws. To-day they quote prices at 12c cash and threaten farther advances. Happy are they who have already laid in their supplies.

BARLEY—Barley maintains its firm feeling of last week and for fine samples of New Feed is gaining an advance. We note sales: 2,000 cts good Bay Feed sold at \$1.02; 100 Coast at \$1; 100 dark do at 97c; 400 do at 95c; 200 do do at 90c; 800 cts choice at \$1.07; 1,800 cts New Feed at \$1.07; 200 and 400 Bay at \$1.07 per cts. The charter of the bark for Callao for Barley reported a few days since has been cancelled, as the price was thought too high for export. Old Brewing is held at \$1.20@\$.130 per cts.

BEANS—There is nothing now in but small White and Pea Beans, and they have advanced 25c per cts.

CORN—Trade is in small amount and prices unchanged. We note sales: 300 sks California large Yellow sold at \$1.95, and 160 at \$1.97.

DAIRY PRODUCE—Prices for Butter have experienced an advance of 2c per lb, which promises to be the beginning of better things. Receipts are decreasing, and dealers do not look for any steps backward from this on. Cheese is unchanged.

EGGS—We note an advance of 2c@3c on fresh California.

FEED—There is no change in ground Feed nor in Hay. We note Hay sales: 25 tons Stock sold at \$8; a cargo do, at \$9 and one of Stable at \$10 per ton. There is still a scarcity of choice Wheat, and it is in demand, at \$12@\$.14 per ton.

FRESH MEAT—The market is quiet and unchanged, except a slight improvement in Spring Lamb.

FRUIT—Our list of Fruits below shows quite a general change in prices incident upon the enlarged amounts of all kinds which are now arriving.

HOPS—There is no change in the local demand. Emmet Wells reports the New York market for the week ending July as follows: "Trade continues dull, and our quotations are more or less nominal. We are now so near the new crop that but little disposition is shown by brewers to buy beyond their immediate wants, and only for the fact that stocks are very much reduced all over, present prices could not be maintained, even in the face of unfavorable crop reports. Our reports from the Hop districts are still quite at variance. Lice abound in nearly every section, but have not done much damage thus far. Our opinion is that yards all over the country are suffering more from lack of care and culture than from any other cause, and while this state of indifference on the part of growers continues to exist, we cannot hope for a large yield or for good quality."

LIVE STOCK—We note sales: 1,700 Sheep, wethers, \$2.65; silver, dressing 56 lbs; 750 Lambs, guaranteed to dress 35 lbs, and fat, \$1.70 delivered; 42 cattle at 4c@5c, about \$27.50 per head, gold; 1,500 hogs at 4c@5c, on foot, silver.

OATS—Oats are still in good request and prices maintained. We note sales: 1,500 and 150 good Washington Territory at \$1.40; 300 good Feed at \$1.47; 700 choice at \$1.52; and 200 at \$1.55; 200 bags choice sold at \$1.57 per cts.

POTATOES—The decline has continued and now Early Rose, best lots, are selling at \$1.25. Other kinds range in the neighborhood of \$1 per cts.

POULTRY—A general reduction has occurred, as shown in our price list. Prices are now subject to considerable fluctuation, owing to uncertain demand.

PROVISIONS—The trade is quiet and without interest.

VEGETABLES—A few variations in ruling rates are noted below.

WHEAT—The market fluctuates somewhat from day to day, and now seems a little weaker than on Saturday and Monday. Shipping is commencing and large purchases of Wheat are reported from the interior. We note sales here: 1,500 cts fair Shipping, \$1.65; 4,200 and 2,000 cts choice Milling, \$1.72; 4,000 cts choice new Milling, \$1.72; 2,000 good Shipping, \$1.62; 1,500 ordinary new Milling, \$1.65; 2,000 Shipping, \$1.65; 500 Superfine, \$1.60, and 900 inferior, \$1.52; 28,000 cts good Shipping, \$1.65; 6,000 Milling, \$1.65, and 4,000 Shipping at \$1.62 per cts.

WOOL—The general market is unchanged. We note sales: 50,000 lbs San Joaquin, 15c@18c; 30,000 lbs Oregon, 18c@21c; 25,000 lbs Nevada, 20c@23c; 15,000 lbs Northern, 21c per lb.

RETAIL GROCERIES, ETC.

WEDNESDAY, M., July 24, 1878.	
Butter, California	25 @ 35
Choice, lb.....	18 @ 25
Cheese.....	25 @ 30
Eastern.....	18 @ 25
Lard, Cal.....	20 @ 25
Flour, ex fam, hbls	10 @ 15
Corn Meal, lb.....	2 @ 3
Sugar, wh. crshd	12 @ 13
Light Brown.....	8 @ 9
Coffee, Green.....	23 @ 35
Tea, Fine Black.....	50 @ 60
Finest Japan.....	55 @ 60
Candles, Adm'te.....	15 @ 25
Soap, Cal.....	7 @ 10

Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]
SAN FRANCISCO, July 24, 3 P. M.
LEGAL TENDERS in S. F., 11 A. M., 99c@99.90. SILVER, 2c@2. GOLD in New York, 100c.
GOLD BARS, 89c@910. SILVER BARS, 8c@15 per cent. discount.
EXCHANGE on New York, 1c; on London bankers, 49c@49. Commercial, 50c; Paris, five francs per dollar; Mexican dollars, 94c@95.
LONDON CONSOLS 95c; Bonds, 103c.
QUICKSILVER in S. F., by the bag, 41c@42c.

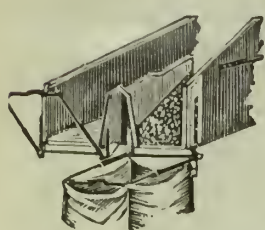
DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., July 24, 1878.		
BEANS & PEAS.		
Bayo, cts.....	5	75 @ 60
Butter.....	4	25 @ 40
Pea.....	4	50 @ 65
Red.....	25	@ 50
Pink.....	6	25 @ 50
Small White.....	4	50 @ 65
Lim.....	4	25 @ 50
Field.....	1	10 @ 40
BROOM CORN.		
Old.....	3	4 @ 7
New.....	4	1 @ 8
CHICORY.		
California.....	4	@ 43
German.....	6	@ 7
DAIRY PRODUCE, ETC.		
BUTTER.		
Cal. Fresh Roll, lb	20	@ 24
Fancy Brands.....	25	@ 26
Pickle Roll, new.....	22	@ 25
Irish, old.....	12	@ 16
Western Reserve.....	12	@ 14
New York.....	—	@ —
CHEESE.		
Cheddar, Cal., lb.....	8	@ 11
Eastern.....	10	@ 12
N. Y. State.....	—	@ —
Gilroy Factory.....	11	@ 13
EGGS.		
Cal. fresh, doz.....	30	@ 32
Ducks.....	23	@ 24
Oregon.....	24	@ 25
Eastern.....	18	@ 22
Old Pickled.....	—	@ —
FEED.		
Bran, ton.....	—	@ 16 00
Corn Meal.....	41	00 @ 42 00
Hay.....	7	00 @ 10 00
Middlings.....	21	00 @ 22 00
Old Calf Meal.....	34	00 @ —
Straw, bale.....	25	@ 60
FLOUR.		
Extra, hhl.....	5	00 @ 50 00
Superfine.....	4	25 @ 45 00
Graham, lb.....	3	@ 31
FRESH MEAT.		
Beef, best quality, lb	5	@ 7
Second.....	4	@ 6
Third.....	3	@ 4
Mutton.....	4	@ 5
Spring Lamb.....	6	@ 7
Pork, undressed.....	5	@ 5
Dressed.....	7	@ 7
Veal.....	6	@ 8
Milk Calves.....	6	@ 7
GRAIN, ETC.		
Barley, feed, cts.....	90	@ 102
Brewing.....	10	@ 15
Chevalier.....	1	50 @ —
Buckwheat.....	1	30 @ —
Corn, White.....	2	@ 25
Yellow.....	1	@ 25
Small Round.....	2	@ 20
Oats.....	1	25 @ 50
Milling.....	1	55 @ 1 65
Rye.....	1	12 @ 15
Wheat, Shipping.....	1	60 @ 65
Milling.....	1	70 @ 80
HIDES.		
Hides, dry.....	16	@ 9
Wet salted.....	7	@ 9
HONEY, ETC.		
Beeswax, lb.....	30	@ 31
Honey in comb.....	11	@ 12
Dark.....	8	@ 10
Honey.....	6	@ 9
HOPS.		
Oregon.....	4	@ 5
California.....	4	@ 7
Wash. Ter.....	4	@ 6
MEAT, Jobbing.		
Wool, Cal.....	7	@ 8
do Chile.....	7	@ 8
Almonds, hd sh lb	7	@ 8
Soft sh.....	14	@ 15
Brazil.....	14	@ 16
Pecans.....	13	@ 14
Peanuts.....	5	@ 6
PEACHES.		
California.....	8	@ 10
do, box.....	4	@ 15
Apricots, lb.....	2	@ 3
Bananas, hnd.....	40	@ 30
Bickberries, ch st	2	@ 30
Cocoanuts, 100.....	3	@ 4
Figs, lb.....	3	@ 5
Gooseberries, lb.....	—	@ —
Grapes, bx.....	35	@ 75
Elms, Mex.....	7	@ 8
Cal. Apr.....	1	@ 15
Lemons, Cal M.....	15	@ 25
Sicily, bx.....	9	@ 10
Mangoes, 100.....	3	@ 10
Oranges, Mex.....	22	@ 25
Tahiti.....	10	@ 20
Cal.....	—	@ —
Peaches, box.....	25	@ 50
do, basket.....	50	@ 75
Pears, box.....	75	@ 175
do, Bartlett.....	1	@ 15
Pineapples, doz.....	4	@ 5
Plums, lbs.....	1	@ 2
Prunes, basket.....	75	@ 100
Raspberries, lb.....	9	@ 9
Strawberries, ch st	2	@ 30
DRIED FRUIT.		
Apples, lb.....	5	@ 7
Apricots.....	10	@ 12
Citron.....	23	@ 24
Dates.....	9	@ 10
Figs, Black.....	4	@ 7
White.....	6	@ 8
PEACHES.		
California.....	8	@ 10
do, box.....	4	@ 15
Apricots, lb.....	2	@ 3
Bananas, hnd.....	40	@ 30
Bickberries, ch st	2	@ 30
Cocoanuts, 100.....	3	@ 4
Figs, lb.....	3	@ 5
Gooseberries, lb.....	—	@ —
Grapes, bx.....	35	@ 75
Elms, Mex.....	7	@ 8
Cal. Apr.....	1	@ 15
Lemons, Cal M.....	15	@ 25
Sicily, bx.....	9	@ 10
Mangoes, 100.....	3	@ 10
Oranges, Mex.....	22	@ 25
Tahiti.....	10	@ 20
Cal.....	—	@ —
Peaches, box.....	25	@ 50
do, basket.....	50	@ 75
Pears, box.....	75	@ 175
do, Bartlett.....	1	@ 15
Pineapples, doz.....	4	@ 5
Plums, lbs.....	1	@ 2
Prunes, basket.....	75	@ 100
Raspberries, lb.....	9	@ 9
Strawberries, ch st	2	@ 30
DRIED FRUIT.		
Apples, lb.....	5	@ 7
Apricots.....	10	@ 12
Citron.....	23	@ 24
Dates.....	9	@ 10
Figs, Black.....	4	@ 7
White.....	6	@ 8
PEACHES.		
California.....	8	@ 10
do, box.....	4	@ 15
Apricots, lb.....	2	@ 3
Bananas, hnd.....	40	@ 30
Bickberries, ch st	2	@ 30
Cocoanuts, 100.....	3	@ 4
Figs, lb.....	3	@ 5
Gooseberries, lb.....	—	@ —
Grapes, bx.....	35	@ 75
Elms, Mex.....	7	@ 8
Cal. Apr.....	1	@ 15
Lemons, Cal M.....	15	@ 25
Sicily, bx.....	9	@ 10
Mangoes, 100.....	3	@ 10
Oranges, Mex.....	22	@ 25
Tahiti.....	10	@ 20
Cal.....	—	@ —
Peaches, box.....	25	@ 50
do, basket.....	50	@ 75
Pears, box.....	75	@ 175
do, Bartlett.....	1	@ 15
Pineapples, doz.....	4	@ 5
Plums, lbs.....	1	@ 2
Prunes, basket.....	75	@ 100
Raspberries, lb.....	9	@ 9
Strawberries, ch st	2	@ 30
DRIED FRUIT.		
Apples, lb.....	5	@ 7
Apricots.....	10	@ 12
Citron.....	23	@ 24
Dates.....	9	@ 10
Figs, Black.....	4	@ 7
White.....	6	@ 8
PEACHES.		
California.....	8	@ 10
do, box.....	4	@ 15
Apricots, lb.....	2	@ 3
Bananas, hnd.....	40	@ 30
Bickberries, ch st	2	@ 30
Cocoanuts, 100.....	3	@ 4
Figs, lb.....	3	@ 5
Gooseberries, lb.....	—	@ —
Grapes, bx.....	35	@ 75
Elms, Mex.....	7	@ 8
Cal. Apr.....	1	@ 15
Lemons, Cal M.....	15	@ 25
Sicily, bx.....	9	@ 10
Mangoes, 100.....	3	@ 10
Oranges, Mex.....	22	@ 25
Tahiti.....	10	@ 20
Cal.....	—	@ —
Peaches, box.....	25	@ 50
do, basket.....	50	@ 75
Pears, box.....	75	@ 175
do, Bartlett.....	1	@ 15
Pineapples, doz.....	4	@ 5
Plums, lbs.....	1	@ 2
Prunes, basket.....	75	@ 100
Raspberries, lb.....	9	@ 9
Strawberries, ch st	2	@ 30
DRIED FRUIT.		
Apples, lb.....	5	@ 7
Apricots.....	10	@ 12
Citron.....	23	@ 24
Dates.....	9	@ 10
Figs, Black.....	4	@ 7
White.....	6	@ 8
PEACHES.		
California.....	8	@ 10
do, box.....	4	@ 15
Apricots, lb.....	2	@ 3
Bananas, hnd.....	40	@ 30
Bickberries, ch st	2	@ 30
Cocoanuts, 100.....	3	@ 4
Figs, lb.....	3	@ 5
Gooseberries, lb.....	—	@ —
Grapes, bx.....	35	@ 75
Elms, Mex.....	7	@ 8
Cal. Apr.....	1	@ 15
Lemons, Cal M.....	15	@ 25
Sicily, bx.....	9	@ 10
Mangoes, 100.....	3	@ 10
Oranges, Mex.....	22	@ 25
Tahiti.....	10	@ 20
Cal.....	—	@ —
Peaches, box.....	25	@ 50
do, basket.....	50	@ 75
Pears, box.....	75	@ 175
do, Bartlett.....	1	@ 15
Pineapples, doz.....	4	@ 5
Plums, lbs.....	1	@ 2
Prunes, basket.....	75	@ 100
Raspberries, lb.....	9	@ 9
Strawberries, ch st	2	@ 30
DRIED FRUIT.		
Apples, lb.....	5	@ 7
Apricots.....	10	@ 12
Citron.....	23	@ 24
Dates.....	9	@ 10
Figs, Black.....	4	@ 7
White.....	6	@ 8
PEACHES.		
California.....	8	@ 10
do, box.....	4	@ 15
Apricots, lb.....	2	@ 3
Bananas, hnd.....	40	@ 30
Bickberries, ch st	2	@ 30
Cocoanuts, 100.....	3	@ 4
Figs, lb.....	3	@ 5
Gooseberries, lb.....	—	@ —
Grapes, bx.....	35	@ 75
Elms, Mex.....	7	@ 8
Cal. Apr.....	1	@ 15
Lemons, Cal M.....	15	@ 25
Sicily, bx.....	9	@ 10
Mangoes, 100.....	3	@ 10
Oranges, Mex.....	22	@ 25
Tahiti.....	10	@ 20
Cal.....	—	@ —
Peaches, box.....	25	@ 50
do, basket.....	50	@ 75
Pears, box.....	75	@ 175
do, Bartlett.....	1	@ 15
Pineapples, doz.....	4	@ 5
Plums, lbs.....	1	@ 2
Prunes, basket.....	75	@ 100
Raspberries, lb.....	9	@ 9
Strawberries, ch st	2	@ 30
DRIED FRUIT.		
Apples, lb.....	5	@ 7
Apricots.....	10	@ 12
Citron.....	23	@ 24
Dates.....	9	@ 10
Figs, Black.....	4	@ 7
White.....	6	@ 8
PEACHES.		
California.....	8	@ 10
do, box.....	4	@ 15
Apricots, lb.....	2	@ 3
Bananas, hnd.....	40	@ 30
Bickberries, ch st	2	@ 30
Cocoanuts, 100.....	3	@ 4
Figs, lb.....	3	@ 5
Gooseberries, lb.....	—	@ —
Grapes, bx.....	35	@ 75
Elms, Mex.....	7	@ 8
Cal. Apr.....	1	@ 15
Lemons, Cal M.....	15	@ 25
Sicily, bx.....	9	@ 10
Mangoes, 100.....	3	@ 10
Oranges, Mex.....	22	@ 25
Tahiti.....	10	@ 20
Cal.....	—	@ —
Peaches, box.....	25	@ 50
do, basket.....	50	@ 75
Pears, box.....	75	@ 175
do, Bartlett.....	1	@ 15
Pineapples, doz.....	4	@ 5
Plums, lbs.....	1	@ 2
Prunes, basket.....	75	@ 100
Raspberries, lb.....	9	@ 9
Strawberries, ch st	2	@ 30
DRIED FRUIT.		
Apples, lb.....	5	@ 7
Apricots.....	10	@ 12
Citron.....	23	@ 24
Dates.....	9	@ 10
Figs, Black.....	4	@ 7
White.....	6	@ 8
PEACHES.		
California.....	8	@ 10
do, box.....	4	@ 15
Apricots, lb.....	2	@ 3
Bananas, hnd.....	40	@ 30
Bickberries, ch st	2	@ 30
Cocoanuts, 100.....	3	@ 4
Figs, lb.....	3	@ 5
Gooseberries, lb.....	—	@ —
Grapes, bx.....	35	@ 75
Elms, Mex.....	7	@ 8
Cal. Apr.....	1	@ 15
Lemons, Cal M.....	15	@ 25
Sicily, bx.....	9	@ 10
Mangoes, 100.....	3	@ 10
Oranges, Mex.....	22	@ 25
Tahiti.....	10	@ 20
Cal.....	—	@ —
Peaches, box.....	25	@ 50
do, basket.....	50	@ 75
Pears, box.....	75	@ 175
do, Bartlett.....	1	@ 15
Pineapples, doz.....	4	@ 5
Plums, lbs.....	1	@ 2
Prunes, basket.....	75	@ 100
Raspberries, lb.....	9	@ 9
Strawberries, ch st	2	@ 30
DRIED FRUIT.		
Apples, lb.....	5	@ 7
Apricots.....	10	@ 12
Citron.....	23	@ 24
Dates.....	9	@ 10
Figs, Black.....	4	@ 7
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PEACHES.		
California.....	8	@ 10
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Apricots, lb.....	2	@ 3
Bananas, hnd.....	40	@ 30
Bickberries, ch st	2	@ 30
Cocoanuts, 100.....	3	@ 4
Figs, lb.....	3	@ 5
Gooseberries, lb.....	—	@ —
Grapes, bx.....	35	@ 75
Elms, Mex.....	7	@ 8
Cal. Apr.....	1	@ 15
Lemons, Cal M.....	15	@ 25
Sicily, bx.....	9	@ 10
Mangoes, 100.....	3	@ 10
Oranges, Mex.....	22	@ 25
Tahiti.....	10	@ 20
Cal.....	—	@ —
Peaches, box.....	25	@ 50
do, basket.....	50	@ 75
Pears, box.....	75	@ 175
do, Bartlett.....	1	@ 15
Pineapples, doz.....	4	@ 5
Plums, lbs.....	1	@ 2
Prunes, basket.....	75	@ 100
Raspberries, lb.....	9	@ 9
Strawberries, ch st	2	@ 30
DRIED FRUIT.		
Apples, lb.....	5	@ 7
Apricots.....	10	@ 12
Citron.....	23	@ 24
Dates.....	9	@ 10
Figs, Black.....	4	@ 7
White.....	6	@ 8
PEACHES.		
California.....	8	@ 10
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Apricots, lb.....	2	@ 3
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Bickberries, ch st	2	@ 30
Cocoanuts, 100.....	3	@ 4
Figs, lb.....	3	@ 5
Gooseberries, lb.....	—	@ —
Grapes, bx.....	35	@ 75
Elms, Mex.....	7	@ 8
Cal. Apr.....	1	@ 15
Lemons, Cal M.....	15	@ 25
Sicily, bx.....	9	@ 10
Mangoes, 100.....	3	@ 10
Oranges, Mex.....	22	@ 25
Tahiti.....	10	@ 20
Cal.....	—	@ —
Peaches, box.....	25	@ 50
do, basket.....	50	@ 75
Pears, box.....	75	@ 175
do, Bartlett.....	1	@ 15
Pineapples, doz.....	4	@ 5
Plums, lbs.....	1	@ 2
Prunes, basket.....	75	@ 100
Raspberries, lb.....	9	@ 9
Strawberries, ch st	2	@ 30
DRIED FRUIT.		
Apples, lb.....	5	@ 7
Apricots.....	10	@ 12
Citron.....	23	@ 24
Dates.....	9	@ 10
Figs, Black.....	4	@ 7
White.....	6	@ 8
PEACHES.		
California.....	8	@ 10
do, box.....	4	@ 15
Apricots, lb.....	2	@ 3
Bananas, hnd.....	40	@ 30
Bickberries, ch st	2	@ 30
Cocoanuts, 100.....	3	@ 4
Figs, lb.....	3	@ 5
Gooseberries, lb.....	—	@ —
Grapes, bx.....	35	@ 75
Elms, Mex.....	7	@ 8
Cal. Apr.....	1	@ 15
Lemons, Cal M.....	15	@ 25
Sicily, bx.....	9	@ 10
Mangoes, 100.....	3	@ 10
Oranges, Mex.....	22	@ 25
Tahiti.....	10	@ 20
Cal.....	—	@ —
Peaches, box.....	25	@ 50
do, basket.....	50	@ 75
Pears, box.....	75	@ 175
do, Bartlett.....	1	@ 15
Pineapples, doz.....	4	@ 5
Plums, lbs.....	1	@ 2
Prunes, basket.....	75	@ 100
Raspberries, lb.....	9	@ 9
Strawberries, ch st	2	@ 30
DRIED FRUIT.		
Apples, lb.....	5	@ 7
Apricots.....	10	@ 12
Citron.....	23	@ 24
Dates.....	9	@ 10
Figs, Black.....	4	@ 7
White.....	6	@ 8
PEACHES.		
California.....	8	@ 10
do, box		

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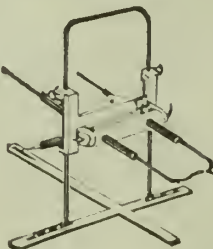
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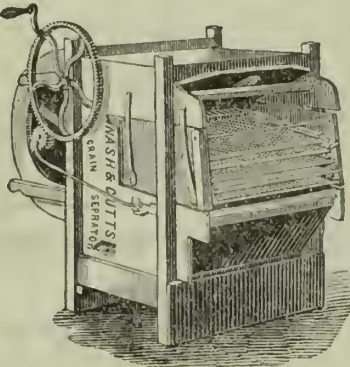
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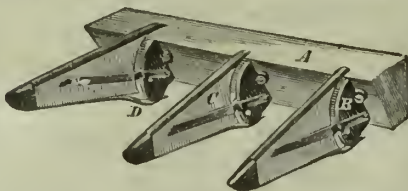
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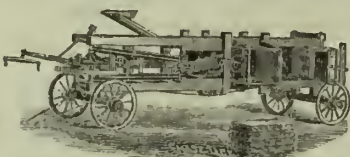
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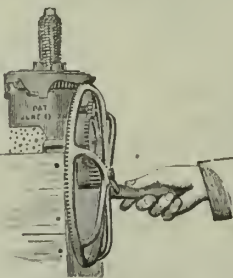
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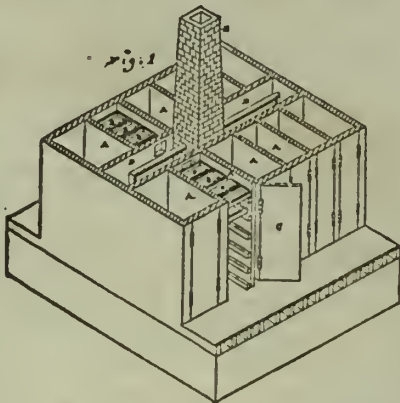
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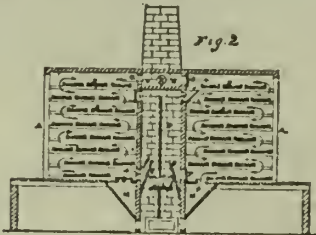
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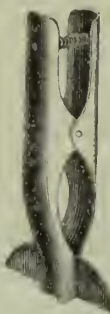


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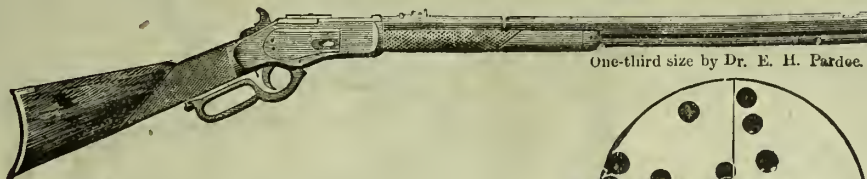
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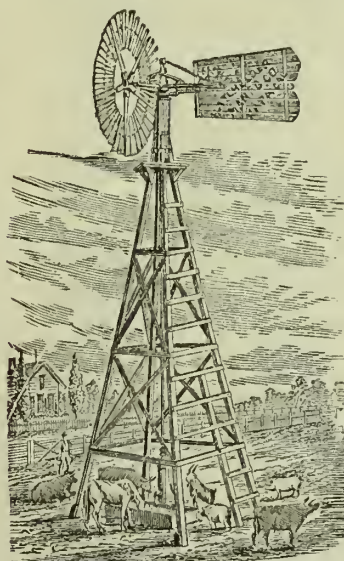
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Nineteen miles from Calistoga, five miles from Middletown, and ten miles from the Great Geysers; between which and Anderson Springs there is a daily line of Stages.

Hot Sulphur Water for Rheumatism, Paralysis, etc.; Cold Sulphur for Dyspepsia, Diseases of the Stomach and Bowels. Scenery unsurpassed. Climate mild and equable. Consumptives generally improve in health, and asthmatics are invariably relieved. Trout Fishing on the grounds. Deer Hunting in the immediate vicinity. Accommodations and Cookery good. Board from \$10 to \$12 per week.

Take the Lakeport Stage that leaves Calistoga, Tuesday, Thursday and Saturday. Fare to Anderson Springs, \$2.50.

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Also, MILLING MACHINERY.

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Pamphlets free. OFFICE, YORK, PA.

A JOB PRESS WANTED.

Any printer having an Eighth or Quarter Medium Job Press for sale, will please address J. P., care of Dewey & Co., S. F. State condition and lowest price.

The Mechanics' Fair Daily.

By authority of the MECHANICS' INSTITUTE, OF THE CITY OF SAN FRANCISCO, the publishers of the MINING AND SCIENTIFIC PRESS will issue a large edition of the NINTH VOLUME of the MECHANICS' FAIR DAILY during the THIRTEENTH INDUSTRIAL EXHIBITION, which opens August 13th, 1878.

It will be of large size, printed and circulated FREE in the Pavilion, and contain the day and evening programme, a list of exhibits, and official bulletin of the Institute.

Its columns will embrace a large variety of important industrial and scientific information, illustrations and well written descriptions of the general features and most deserving and novel exhibits in the Fair, a record of the Fair and incidents of its daily progress—gay, serious and comic—as they occur.

The best of editorial, reportorial and corresponding talent will be employed, with a view to make the paper of live interest in all its departments and of standard value as a full record of the great exhibition, the wonderful inventions, rich resources and rapid progress of our great Western community.

More than ONE HUNDRED THOUSAND different individuals will read copies of our paper during the Fair. The novel character of the journal—the specially attractive features of its free issue in the Pavilion, and its absorbing interest to visitors at the Fair, the attention its columns command when brought into the shop and family circle by those who receive it freely at the Fair, make the paper a powerful advertising medium.

The Managers have granted us the exclusive advertising and printing privileges, and will receive no advertising in the official catalogue and reports.

Our eight previous volumes have met with unrivaled success and gratifying results to advertisers, nearly all of whom were leading and first-class business firms.

Many thousands of marked copies were sent by mail and otherwise to friends near and distant, giving the FAIR DAILY a more broadcast and universal circulation than any other newspaper published.

Its columns are more closely examined throughout than those of any ordinary publication.

By past experience, ample facilities, and a fair reputation of doing business in our line, we expect, with the reasonable support of all naturally interested in the success of our enterprise, to make the coming volume superior to its predecessors, and eminently satisfactory to the Institute, to our patrons and to the general public, who are more or less benefited by such an advocate of the substantial advancement of the grand and worthy industries of our Coast.

DEWEY & CO., Publishers.

Office, MINING AND SCIENTIFIC PRESS, No. 202 Sansome street, N. E. corner Pine, San Francisco.

POPULAR MUSIC.—Make your homes merry and popular with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. The RURAL PRESS can offer to introduce you there.

UNIVERSITY OF CALIFORNIA.

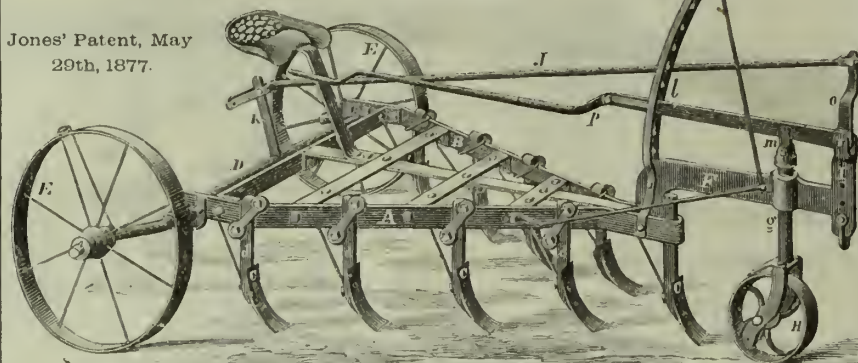
The August examinations for admission to the Colleges of Letters and of Science, will be held at Berkeley on WEDNESDAY, THURSDAY and FRIDAY, August 7th, 8th, and 9th, each day, at 10 A. M.

The University year begins August 8th. By order, M. KELLOGG, Dean.

HOLLY & MACOON'S CULTIVATOR.

Manufactured by Holly & Magoon, Stony Point, Sonoma Co., and Holly & Jones, Lakeville, Sonoma County.

Jones' Patent, May 29th, 1877.



This Cultivator is made by practical men, after years of experience, and better meets the wants of California farmers than anything before offered.

Made of the best material (with wood or iron frame), and warranted in every respect.

Prices REASONABLE.

For further information address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Francisco and Sacramento, Cal.

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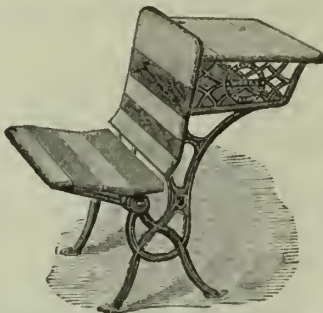
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School, Office, Church, Lodge and Household Furniture, Etc.

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"THE PEERLESS."



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GILBERT & MOORE, 219 Bush Street, San Francisco, Cal.

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MARKS.

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TO LUMBERMEN.

The Property of the Duncan's Mills Land and Lumber Company,

Sixty miles from San Francisco, at the terminus of the North Pacific Coast Railroad, Sonoma County, is offered for sale on very favorable terms.

There are 3,500 acres of Redwood Timber land, new steam saw-mill, general store, dwellings, logging railroad, water works, etc.

Satisfactory reasons for selling will be given to prospective purchasers.

Also, if desired in connection with the above, a lumber yard on the Bay of San Francisco, having superior facilities for shipping by rail or by water, and having a large and constantly increasing business.

For full particulars address

JOHN F. BYXBEE,

No. 22 California Street, San Francisco, Cal.

Take the paper that stands by your interests

SEMI-ANNUAL STATEMENT

OF THE

Grangers' Bank of California,

Incorporated under the laws of the State of California, April, 1873.

Published in Compliance With Law. July, 1878.

Capital Stock Subscribed \$1,350,000 (Payable in 10 installments of 10% each.)

Capital paid up in U. S. gold coin... \$385,000 (On three installments levied.)

COMPARATIVE STATEMENT.

Capital paid up in Gold Coin at the opening of the Bank:

In July, 1874.....	\$25,000 00
In January, 1875.....	64,200 00
In July, 1875.....	110,500 00
In January, 1876.....	168,400 00
In July, 1876.....	210,000 00
In January, 1877.....	235,000 00
In July, 1877.....	330,000 00
In January, 1878.....	350,000 00
In July, 1878.....	385,000 00

State of California, City and County of San Francisco. G. W. Colby and A. Montpeller being each duly sworn, severally depose and say: That they are respectively the President and Cashier of the Grangers' Bank of California above mentioned, and that the foregoing statement is true. San Francisco, July 15th, 1878.

G. W. COLBY, President.

A. MONTPELLIER, Cashier and Manager.

Subscribed and sworn to before me this 20th day of July, 1878.

J. ROBERT READ, Notary Public.

Statement of the Actual Condition and Standing of the Grangers' Bank of California.

ASSETS.

Loans and Discounts and Current Accounts (secured by Mortgage and other Collateral).....	\$530,160 77
Real Estate—Bank's interest in Grangers' building, San Francisco.....	38,400 00
Real Estate in Sonoma and Solano counties.....	8,880 42
Office Furniture and Safe in Vaults.....	2,697 05
Cash on hand.....	73,431 52
	\$650,568 76

And that said Assets are situated in the following counties, to-wit: San Francisco, Alameda, Nevada, Contra Costa, Yolo, Solano, San Joaquin, Stanislaus, Merced, Kern, Tulare, Sonoma, Napa, Tehama, Butte and Colusa.

LIABILITIES.

Capital Stock (3 installments levied).....	\$403,600 00
Deposits on Current Account, Certificates of Deposit, Term and Demand Accounts.....	217,589 77
Special Deposits by Stockholders, to be applied to future installments on Capital Stock subscribed.....	6,190 00
Dividends unclaimed.....	3,612 45
Profit and Loss and Interest Accounts, being undivided profit since last annual meeting, October, 1877.....	28,486 54
	\$650,568 76

ANNUAL DIVIDENDS PAID.

In 1875.....	7% on Capital paid up.
In 1876.....	10% on Capital paid up.
In 1877.....	10% on Capital paid up.

State of California, City and County of San Francisco. G. W. Colby and A. Montpeller, being each duly sworn, severally depose and say that they are respectively the President and Cashier of the Grangers' Bank of California, above mentioned, and that the foregoing statement is true. San Francisco, July 15th, 1878.

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A. MONTPELLIER, Cashier and Manager.

Subscribed and sworn to before me this 20th day of July, 1878.

J. ROBERT READ, Notary Public.

Any person receiving this paper after giving an order to stop it, may know that such order has failed to reach us, so that the paper is continued inadvertently, and they are earnestly requested to send written notice direct to us. We aim to stop the paper promptly when it is ordered discontinued.

DEWEY & CO'S

Scientific Press

Patent Agency.



Office—202 Sansome St., N. E. Cor. Pine, S. F.

PATENTS obtained promptly; Caveats filed expeditiously; Patent re-issues taken out; Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments reported in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; Every legitimate branch of Patent Soliciting Business promptly and thoroughly conducted. Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons, and our success and business are constantly increasing. The shrewdest and most experienced inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

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Publisher of the PACIFIC RURAL PRESS,

No. 202 Sansome Street, San Francisco.

WOODWARD'S GRAPERIES & HORTICULTURAL BUILDINGS. Designs and Plans of Hot Beds, Cold Pits, Propagative Houses, Forcing Houses, Hot and Cold Graperies, Green Houses, Conservatories, Orchard Houses, etc., with the various modes of Ventilating and Heating. Price, \$1.

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ELLIOTT'S LAWN AND SHADE TREES. For Planting Parks, Gardens, Cemeteries, Private Grounds and Avenues. Fully Illustrated. Price, \$1.

FULLER'S FOREST TREE CULTURIST. The Cultivation of Forest Trees for Shade, for Shelter, for Fuel, for Timber, and for Profit. Illustrated. Price, \$1.

RANDALL'S PRACTICAL SHEPHERD. New Edition, Extra Fine Binding. A complete Treatise on the Breeding, Management, and Diseases of Sheep. By Henry S. Randall, LL. D., author of "Sheep Husbandry in the South." "Fine Wool Sheep Husbandry," Etc., with Illustrations. Price, \$2.

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WILLARD'S PRACTICAL DAIRY HUSBANDRY. New edition. A complete Treatise on Dairy Farms and Farming, Dairy Stock and Stock Feeding, Milk, its Management and Manufacture into Butter and Cheese, History and Mode of Organization of Butter and Cheese Factories, Dairy Utensils, etc. Price, \$3.

LEWIS' PRACTICAL POULTRY BOOK. A Work on the Breeds, Breeding, Rearing, and General Management of Poultry, with Full Instructions for Caponizing. 100 Engravings. Octavo. Price, \$1.50.

TEN ACRES ENOUGH. A Practical Treatise, showing how a very small farm may be made to support a very large family, with full minute instructions as to the best mode of Cultivating the Smaller Fruits, such as Strawberries, Raspberries, Blackberries, etc. Price, \$1.

FLAX CULTURE. A Manual of Flax Culture and Manufacture, with Directions for Preparing Ground, Sowing and Harvesting, including Hemp and Flax Culture in the West, and Preparation for Market. Price, 10 cents.

WOODWARD'S NATIONAL ARCHITECT. Vol. 2. Complete in itself. Embracing New and Original Designs, Plans, Elevations, Sections, and Detail Drawings to Working Scale for City and Country Houses. 100 Quarto Plates. Superb Binding. Price, \$7.50.

Any of the above books will be sold on the Pacific Coast, by Dewey & Co., and mailed for the price named. [In some instances there may be a delay (not over twenty days) from receipt of orders with the cash.] Other agriculture books furnished at the publishers prices.

DEWEY & CO., Publishers, 202 Sansome Street, San Francisco.

This paper is printed with ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y.

PACIFIC RURAL PRESS

Volume XVI.]

SAN FRANCISCO, SATURDAY, AUGUST 3, 1878.

Number 5.

The Barley Outlook.

John Barleycorn promises to be a stronger kneed chap this year than some of his friends feared as they looked upon the large area devoted to his culture in this State. Thus far the price has held itself up very well considering, and the supplies which are now coming forward are quickly taken. With the abundance of bay it is but fair to expect that feed barley would be apt to rule low rather than otherwise, but many growers have secured yields per acre which can be sold comparatively low and yet pay for the growing. On the other hand there is reason to expect that good brewing barley that will do to export will be an easily marketed grain all through the season. Of course we cannot foresee conditions that may arise hereafter, but the outlook from this point is fair. If freights either by rail or water or both can be had at a favoring rate there will be a much greater export of Barley to the Eastern States than ever before, and thus an outlet for our surplus may be secured. Some time ago we gave notice that the acreage of barley in the great central grain-growing States was reduced, on the average, 35%. Last week a report from the Department of Agriculture placed the probable yield of barley per acre at about the average of favorable years. Therefore, it is fair to expect that the aggregate harvest of barley this year in those States will be about one-third less than last year. This will give us a chance to push in a little of our barley.

Another point is this. Most readers know that many of the best brewers in the Eastern States place dependence upon Canadian barley which is superior in some respects to that grown on the lower side of the great lakes. Now there comes a trustworthy report that the Canadian barley crop will be short about 4,000,000 bushels. The Belleville (Canada) *Intelligencer* says: "Mr. Lawder, the well-known agricultural authority, writes that returns from nearly all the principal barley-producing counties of Ontario show a large decrease in the acreage from last year, varying from 'small breadth sown' up to 'same as last year,' and where the deficiency is estimated it is placed at from 12 up to 60%. Twenty returns of this description show an acreage decrease of 36%. A careful consideration of all the preceding returns seems to indicate that the acreage under barley in 1878 is about 40% less than 1877; the yield likely to be about the same as last year; probable deficiency in acreage, 140,000 acres, and in yield about 4,000,000 bushels."

Another fact of more remote connection with our surplus, but still influencing the world's supply of the beer-giving grain. In its market review, the latest received issue of the London *Farmer* says: "There were many good reasons why barley should be steadily held. Malting sorts were scarce, and continuous and heavy falls in the price of grinding descriptions had amply sufficed to restore the balance displaced by Russia's spring shipments. The prospects of the barley crop in England, France and Germany were deemed to be less promising than the prospects of wheat, of oats, or of pulse, while the demand for barley is largely on the increase throughout the whole of Western Europe."

All these things have a greater or less bearing upon the prospective price of our brewing surplus, and it will be well for growers to have them in mind if attempts are made to crowd the price below a fairly profitable rate.

DETERMINING THE VALUE OF GRASSES.—We read in the *Cultivator* that an interesting and important work has been assumed by the Department of Agriculture at Washington, in analyzing specimens of grasses from various sections of the country, for the purpose of ascertaining the nutritive properties in the feeding of stock. Twelve hundred distinct varieties are already known, of which New England alone furnishes 200. The details of the inquiry will determine the average growth, soil needed, amount of moisture necessary, and whether or not large sections of land now almost barren may be made profitable to culture. We esteem investigations of native crops and development of present resources of great value, and trust light may be thrown upon plants suitable for California conditions.

La Belle Cascade.

The engraving on this page gives the reader a glance at a pretty little piece of California scenery located in San Gabriel valley, Los Angeles county. The engraving is made from one of Mr. Watkins' admirable series of photographs of natural scenery in this State. The charming waterfall has a wide local fame, but is only one of many beautiful "bits of nature" which the locality possesses. For a description of the scene shown in the engraving we are indebted to an accomplished writer, resident in San Gabriel, who modestly styles herself "Ecila." She writes as follows:

A delightful trip, and one that the residents

larkspur and honeysuckle, and a dainty little flower of a delicate buff; and beyond, halfway up the steep hillsides, are yuccas in great profusion—the time of blossoming is past, however, and the immense peduncle bears only the green fruit—not a single waxen flower remains.

Meanwhile your pathway seems, at each step, to grow more rugged and stony. If you are unaccustomed to mountain climbing it appears impossible to keep your footing on that barren ledge. You look up and see huge rocks threatening to topple over and crush you out of existence. You are half inclined to turn back, and doubt if any waterfall could repay you for this long, wearisome tramp. Still you press on, not to be outdone by the rest of the party, and as you round a vast mass of rock and earth covered with a thicket of tangled vines, "La Belle Cascade" smiles upon you. In front of



LA BELLE CASCADE, SAN GABRIEL VALLEY.

of the San Gabriel valley are fond of taking, is to the lovely little fall in Eaton's canyon known as "La Belle Cascade."

If you would like the jaunt you leave the Mission San Gabriel rather early in the morning—for you will need the whole day for your pleasuring—and drive or ride some six or seven miles on a good hard road to the mouth of the canyon in the San Gabriel range. Here you must leave your comfortable carriage and pet pony, and travel the remaining mile and a half on foot, for the canyon narrows very perceptibly at times, and you will come to places where the most experienced mountain horse could hardly gain a foothold.

Now you reach the stream which you will cross 20 or 30 times, creeping along the trunks of fallen trees, or jumping from rock to rock on to the slippery stones—very likely giving your feet a dip in the cool water, unless you have taken the precaution to wear rubbers.

How clear and sparkling is the water as it hurries along, forming miniature cataracts and rapids!—forming also the still deep pools in which the wary trout finds a hiding place!

Near the stream grow the gorgeous scarlet

the fall are immense stones, worn smooth by the waters, where you can rest while you enjoy the charming picture.

The cascade is rightly named "The Beautiful" as it flows from a cleft in the rock, and descends some 30 or 40 feet in a sheet of white foam; and then the streamlet rushes along over the boulders, creating a succession of bewitching little waterfalls.

On either side and beyond the cascade tower rocky walls, all their ruggedness softened and beautified by a covering of fairy-like moss, maiden's hair ferns and delicate trailing vines.

On all sides the lofty hills seem to shut you in, and directly overhead you catch a glimpse of the blue California sky; but the most pleasing part of the whole scene is the foaming water as it pours down over the walls of living green.

Well has it repaid your toilsome trip through the briars, and your scramblings over the slippery rocks, and you would willingly journey twice as far, provided you could find another waterfall as charming as "La Belle Cascade."

THERE are rumors of cholera in Japan.

The Largest Plow in the World.

How vain is boasting! Here comes a railroad journal, the *Railway Age*, and, with victor's tone, voices this paragraph:

The largest plow in the world, singularly enough, is one just built, not for a "large farmer" but for the granger's *bete noir*, a railway company. The Chicago, Milwaukee & St. Paul has ordered it to use in ditching for railway construction in Iowa, and it is to be drawn neither by horse, ox or mule, but by a locomotive. The dimensions of this steam-pulled ditcher are given as follows: The share weighs 382 pounds, the mold board, 180 pounds; the beam, 900 pounds; the coulter and clasp, 180 pounds; the clevis, 60 pounds; the standard, 134 pounds. The sizes of the principal parts are: Beam, 16½ feet long, 10 inches wide and 17 inches thick; land slide, 9 feet by 5x2 inches, standard, 40 inches by 7x1½ inches; mold board, 8 feet by 26 inches; share, 5½ feet by 12 inches. It will cut a furrow 37 inches wide.

This puny, one-locomotive implement is then put forth as "the largest plow in the world," and the agriculture of the country seems to have kneeled in silent acquiescence in the railroad's claim! We have waited in the hope that California prowess would not be needed to crush such a tiny upstart, but if the rest of the country holds its peace, California does not. The fact is that California agriculture can so far overlie this mooted monster in the plow line, that if the Iowa plow should fall into the California furrow they would have to get a lantern to find it with.

A few years ago a plow was built on the Livermore ranch in Kern county, according to the design and under the supervision of Mr. W. H. Souther, which, if it should meet this Iowa plow, it would serve it as a locomotive might a hand-car. It is called the "Great Western," and these are its weights and measurements: Beam, 18 feet long, 18 inches deep and 10 inches thick; landslide, 17 feet long, 5 inches wide and 1½ inches thick; standard, 3 feet high; mold board, 12 feet long and 3 feet high. This plow weighs one ton and is swung, by a heavily ironed wooden arch, between two wheels eight feet in diameter and with tires six inches wide. The attaching of the body of the plow to this arched axle of the wheels is accomplished by running two heavy fenders back from the arch, and fastening them to the back ends of the beam and mold board. A 14-foot lever runs from the mold board across the back end of the beam, and on this a man stands to adjust the plow as to depth of cut, etc. The "Great Western" cuts a furrow four feet wide and three feet deep, and is drawn by 80 oxen, yoked to a wire cable one inch thick. This cable weighs 1,140 pounds.

There follows the plow a A shaped scraper, drawn by a chain from its apex by 80 mules. It is 12 feet wide and 3 feet high at the open end. The sides are heavy iron. This, following the plow, shoves the furrow out 10 feet from the place it is left by the plow.

With the "Great Western" and its scraping follower, the Kern Island canal and many of its branches or sub-canals were built in one quarter the time that it could be done with any other machine now in use, and for a much less sum of money.

Such are the facts in brief, for we have not aimed to describe the machinery in full. The lesson which our Chicago contemporary should draw is the beauty of speaking with becoming modesty, and when an Iowa railroad constructs a little cultivator to scratch along the sides of its tracks, do not again call it "the largest plow in the world."

CHEAP HAY.—Hay is cheap enough, one would think, in this State and stocks are numerous enough upon our fields. We read, however, that in Silesia and Rhenish Prussia the hay crop has been got in capital condition, and in very unusual quantity. In some parts of the Lower Rhine prices have fallen as low as \$2.50 a ton for clover, lucerne (alfalfa) and meadow hay, and this has led to large purchases of store cattle on the part of the owners, in the hope that they may find in feeding a more profitable employment for their crops than in selling them at five cents a truss.

MONTEREY FAIR.—Vice-President J. R. Hebron informs us that the date which we have heretofore given for the fair of the Monterey Agricultural Fair Association is incorrect, and that the fair will be held in Salinas City, October 8th to 12th. Two thousand dollars coin is offered in purses for speed contests. Readers will note the true date.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Amador County.—No. 2.

EDITORS PRESS:—A ride of 12 miles, in an easterly direction, over quite a good mountain road, in an old-fashioned stage coach and four, under the pilotage of an accomplished whip, time two hours, and we were safely landed at Jackson.

The county seat of Amador county. This town is very prettily situated at the junction of the three branches of Jackson creek—the South, Middle and North forks. The buildings on the principal business street are built mainly of brick and protected from fire by iron doors and iron window shutters. The courthouse and county buildings are quite tasty specimens of architecture, and are located conspicuously upon the most elevated site in the village. There are a number of very handsome cottages with large grounds, ornamented by great varieties of shade trees, fruit trees and flowers, which beautify and make home attractive. There is a large quantity of fruit raised in the town and vicinity, the surplus of which is purchased and dried for market by an incorporated company who have here a large Alden fruit drying establishment. There are two weekly papers published here—the *Dispatch* and the *Ledger*, a number of general stores, drug stores, livery stables, saloons, hotels, also a good public school, and churches enough to supply the demands of a population of about 1,200. The altitude of the courthouse is about 1,200 feet above tide water.

There is a large amount of farming all around Jackson. The crops never fail when properly put in, but this year the yield is unusually large. Of the many farms examined we will mention but one, and that as an illustration of foothill farming. This farm is situated about half a mile south of Jackson, and owned by Capt. M. J. Little. The land is high and rolling, and the soil is the red loam peculiar to the mountains of California; the bedrock in many places lying near the surface. This year Capt. Little cut $4\frac{1}{2}$ tons of barley hay per acre. The hay was weighed and the land measured. Last year 33 bushels of wheat per acre was harvested; this year it is believed the yield will be 20% to 30% greater. Corn is looking well. Potatoes are large enough to use. Fruit trees are well laden with fruit which is advanced beyond that of the valleys. This result is attained by cultivation, stirring the soil, and without a drop of water except what falls from the clouds. The land for wheat and hay is summer-fallowed. It is plowed in the winter, cross-plowed in the spring, harrowed to pulverize the soil; then seeded, rolled and harrowed again. The wheat stands thick on the ground, straight and clean, and well filled, and at this writing, June 17th, nearly ripe enough to cut.

Sutter Creek.

This town is situated on the stream of the same name, four miles distant from Jackson, in a northerly direction, and 12 miles from the terminus of the Amador railroad at Ione City. This is the largest town in the county, and by reason of its proximity to several very large gold quartz mines, it is the most lively business place in the county. The mines nearest the village are, first, the Amador Con. mine and mill, which employs a great many men. Next the Lincoln gold quartz mine and mill, which also has quite a long pay-roll; also the Mahoney, now shut down, owing to some little "unpleasantness" among the owners, which it is hoped will soon be adjusted, which gives employment to about 100 men. The Oncida and Kennedy mines are close, each with a large number of employes, who draw their supplies from Sutter Creek; also the Amador Canal company's saw mill and lumber yards $1\frac{1}{2}$ miles from Sutter Creek, require quite a number of laborers. There are two chloridizing establishments for the reduction of gold-bearing sulphurets, two very respectable foundries, a hardware store, a drug store, two hotels, a number of dry goods, grocery, furniture, clothing, jewelry and variety stores; also a good supply of tradesmen and mechanics' shops, saloons and cigar stalls in excess of demand, two churches, a public school of 425 children, Masonic, Odd Fellows and Temperance lodges, doctors and dentists and ministers plenty, and all the other concomitants and accessories of a high state of civilization deemed necessary to the comfort and convenience of a population of 1,500 to 1,800 people, but no Chinamen.

There are many fine residences beautified and ornamented by trees and flowers in great profusion. Fruits are grown in great abundance, even the orange, which we saw in full bearing. The town is well supplied with water for household, irrigating, milling and manufacturing purposes, as well as a protection against fire. The reservoir is located on the hill east of the town, at an elevation of between 300 and 400 feet above the main street. The supply is obtained from the Amador canal, the source of which is the headwaters of the Mokelumne river.

A pleasant drive of two miles eastward from Sutter Creek, over a good road, sandwiched by fields of ripening wheat and barley, fields of new-mown hay, sending its fragrance to greet and cheer the traveler, fields of blooming alfalfa, orchards, vineyards and home-inviting farm houses, brings us to the village of Amador City.

This town is situated on Amador creek, has a population of about 1,000, a public school with 250 children on the roll, one hotel, five general stores, one livery stable, a public hall, one church, shops, saloons, etc. The town wears a thriving, prosperous look. It is most noted, however, by its celebrated mines, of which the Keystone is the principal. This mine has turned out about \$40,000 per month for the last 12 years, and gives no indication of ever letting up. They work about 100 men in the mine, the majority of whom have families and live in cottages adjacent to the works. The Original Amador mine, the Bunker Hill mine, the Gover mine, the North Gover mine, the Talisman mine, are all valuable gold mines, giving employment to a good many laborers, residents of Amador City.

The next place on the road traveling east, and about two miles from Amador City, is the village of

Drytown.

Situated on Dry creek, eight miles from Jackson. This is an old mining camp, and was during the flush times of placer mining a very lively place. There is a good deal of farming and fruit growing in the neighborhood. There are no mines being worked in the immediate vicinity of the town at the present time, but about a mile distant is the California Potosi, a mine that bids fair, from present developments, to become an important industry.

Plymouth.

This place is three miles northeast of the last mentioned town. Population, 650; public school, 200 pupils; three hotels, four general stores, two drug stores, two variety stores, one livery stable, blacksmiths, jewelers, butchers, three physicians, two churches, etc. The Phoenix gold mine and mill, owned by Alvinza Hayward, of San Francisco, is situated in this town, which is the basis of the business-like appearance and evident prosperity of the town. The mine and mill give employment to 105 men, who live in handsome cottages in this pleasant village, their houses being surrounded with fruit and shade trees and beautified with flowers. The town is also surrounded by quite an extensive farming community who have been well rewarded for their labor, especially in the greatly increased hay crop.

Seven miles east of Plymouth, over a good ridge road and through a pleasant and thrifty farming country, brings the traveler to the old mining camp of

Fiddletown.

Or, as it is to be called in future, Oleta. This place was settled in 1850 and rapidly acquired a very large population. Dry creek, which runs through the town, and Slate creek, one and one-half miles south, and all the gulches and ravines putting into them were very rich, and the tourist—when one strays through this ancient camp—is regaled in turn by the few semi-human fossils, remnants of '49 and spring of '50, with the immense strikes, big nuggets, large fortunes and happy times realized by themselves and their associates in the distant past, when they were young and full of ambition and energy, when, too, the country was young and bright and the mines apparently inexhaustible, and to them in their thoughtlessness and improvidence gave promise of forever honoring the daily drafts upon their stores of hidden wealth, but alas, the end came, the mines were worked out, the money was soon expended, and the few old settlers who have survived the flush times do little else than bewail their seeming misfortunes, or recount their successes in the early settlement of the county. This place has been singularly fortunate in escaping the ravages of fire. Many of the old shake cabins built in the quaint style of architecture prevalent with the frontier are still standing, embowered by climbing roses and honeysuckles and shaded by forests of tall locusts, black walnuts and cottonwoods. Peaches and apples, pears and plums are grown to perfection. Farming, when done right, is here universally successful. This is essentially a foothill locality, the altitude being about 2,000 feet above the level of the sea. Among the farmers visited, the names of one or two will be sufficient to illustrate the methods adopted to make foothill farming a success.

J. F. Ostram.

Whose farm adjoins the town, has under cultivation 50 acres and does all his own work. He cuts two crops of alfalfa yearly, average, five tons per acre both cuttings, then pastures fall and winter. He cuts three tons of wheat hay per acre, reaps 25 bushels wheat per acre. He gets a good crop of corn, well eared and well filled. He raises potatoes and onions to sell; garden "truck" in abundance and all this without irrigation. Mr. Ostram says it is done with the plow. He summer-fallows, cross-plows, harrows and ridges his land, exposing it to the sun as often as possible during the season of rest. By this means he not only pulverizes his soil, the more thoroughly preparing it for seeding in the fall, but he kills out the vegetable pests, the worst of which is the broncho grass or porcupine grass, which is probably the chess or cheat following the destruction of the wild oats.

Adjoining the farm of Mr. Ostram is that of

Mr. H. C. Farnum, who is equally successful in getting good crops every year, and who pursues the same plan in preparing his land for the seed.

Mr. S. C. Gilbert.

About three miles distant from the last mentioned, is particularly successful in raising corn. He assured us his success was the result of constantly stirring the soil. He plows his corn about nine times during the growing season. Alfalfa grows well and yields largely on all the mountain ranches, and it can be planted in the fall, and does not, as generally thought, freeze out in the winter, but makes a good strong root, which enables it to tide over the drouth of the first season.

In this part of the county there is a great plenty of timber for fencing and buildings. Good water can be had by digging wells from 10 to 50 feet deep, and on many of the ranches are springs. The land has been surveyed and government titles can be obtained. There are still thousands of acres of land not located that can be preempted or bought at government price, that will make just as good farms as those described above. There is room enough in Amador county and the counties adjoining, on unclaimed government land, for every homeless working man or woman in San Francisco or the State of California, to get a home on a farm, on which, by industry and economy, not only a good living can be assured, but comforts and luxuries acquired, and the prosperity of the commonwealth greatly advanced.

Volcano.

This town, settled in '49, was originally called "Soldier's Gulch," but the next year the name was changed to Volcano, which seemed more appropriate and euphonious. It is situated in a deep basin washed out by Sutter creek, though having the appearance of an old crater or bed of a lake. Powerful dynamic forces have evidently been at work here, the vicinage presenting an interesting field for the study of geology. Volcanic, diluvial, glacial and earthquake agencies have all left traces of their action in the tall hills, deep ravines and lava flows of the neighborhood. The rich alluvial soil, resulting from the attrition of these warring forces, and the more genial influences of the atmosphere and sun, holds the gold that at first so richly rewarded the labors of the miner, and produces the abundant crops of grain and the luscious fruits that bless the farmer and the orchardist. The placer mines have been fabulously rich, it being estimated that \$25,000,000 have been taken from this small basin. Mining and prospecting has been much neglected since the surface placers were exhausted, until the last year, when a little life was infused into this lethargic population by a few enterprising men, who have undertaken to develop some of the untouched mineral resources of this extraordinary locality. A tunnel is being run in to tap the basin, starting one mile below town on Sutter creek, and when completed will affect a drainage 42 feet deeper than it has heretofore been worked. This tunnel will drain several hundred acres of mining land, and undoubtedly make available a large amount of hidden treasure.

Another enterprise which promises large pay is the opening of a gravel bed on Grass Valley creek, near Volcano. This is a work requiring considerable capital, as a cut through the rim-rock had to be blasted to a great depth to get sufficient fall. This property is owned by Mr. Charles McLaughlin, of San Francisco, and the work is being managed by M. L. McLaine, of Volcano. There are a great many quartz mines in the vicinity of this town that are thought to be valuable, but are permitted to remain idle and non-productive for the want of a little capital to start the work. Agriculture, horticulture and floriculture have received some attention here, with results about on a par with what has already been described at other places in the county.

The Lumber Interests.

From Volcano east to the summit of the Sierras there is not much agriculture, although in many of the valleys hay is raised in great abundance, but the principal interest is the great abundance of timber, principally pine and cedar. There are some four or five saw mills that are daily turning out large supplies of lumber, besides the great number of saw logs and mining timbers that are daily floated down the Mokelumne river and the different canals to mines and mills in the lower part of the county. This industry, now a very valuable one, is destined to become much more important as the county increases in population and wealth, as it will be sure to do when the enterprising people of the State become better informed as to the natural advantages and resources of this region.

Silver Lake.

This lake is located in the extreme eastern portion of the county, on the summit of the Sierras, and near the Alpine county line. It is a beautiful sheet of water about six miles in length, surrounded by lofty snow-capped mountains, embowered by ragged rocks and gigantic trees, waterfalls and glaciers, rare botanical specimens, unique and beautiful varieties of mosses and ferns, and everything that could be conceived to add to the grandeur and sublimity of the scenery. The fishing and hunting is splendid, the climate cool and refreshing.

One of the curiosities to be seen here is the architecture displayed by a large black ant on many of the large cedar trees found here in great abundance on the hillsides. They bore or cut into and through the trees, forming halls and cross halls and rooms of different sizes,

displaying much precision and system in their excavations. They even form stair ways by which halls and rooms above are reached, going up until the tree is so weakened that it falls or they are driven out from some other cause. The ant is about one-half an inch long, with strong jaws, teeth on the sides, and operates when entering a little like a pair of scissors.

A good hotel is being opened near the lake for the accommodation of tourists and those who desire a nice, cool and quiet summer resort.

Two miles beyond Silver lake is Dr. Caple's lake, much smaller than Silver lake, noted for its very large spotted trout—splendid beauties and easily caught. There is good hotel accommodations at this lake. These lakes are reached by the Amador turnpike, which passes clear through the county from Ione City to the eastern boundary. The distance from the terminus of the Amador railroad at Ione City to Silver lake is 60 miles, with plenty of feed and water and camping facilities all along the road.

W. G. A.

Jackson, July 1st, 1878.

The Wheat and Cheat Question.

Tests at the University.

EDITORS PRESS:—I have received the following letter concerning testing the wheat and cheat question at the University:

DEAR SIR: In an article over your signature in the PACIFIC RURAL PRESS of July 13th, I find a proposition to the effect that you will afford every facility of your laboratory for a fair and full experiment for the testing of the question of wheat degenerating to chess or cheat. I believe that I can convince you of the same. I propose that you apply any test you please to the soil (enough of the constituents of wheat to sustain its full maturity remaining) for its purification and leaving it all in your care, and yourself planting ten or more grains of sound wheat, giving it proper care until well spread on the ground, and before the stalk has shown itself and then give me access to it in your presence and by a very simple process or operation I will perform, you shall have as many heads of chess as I operate upon the growing wheat which you planted and cared for yourself. I will, if you wish, leave half the plants to produce wheat, so you may study them side by side. I would like at the same time you should plant in equally good and clean soil a few grains of chess and give it the same care you do the wheat and see if you can raise chess from chess. From the interest taken in this question by all the farming community I would think it worth careful experiment. For my use I would as soon have any good earth without scientific preparation as with, and am willing to try say five or ten times on as many different sets as you can assure me are wheat all growing at the same time.—H. B. LATROPP, 629 O'Farrell street, S. F.

In reply to this letter I wrote as follows: Yours of 16th inst. is just to hand, on my return from a two weeks' absence, whence the delay in my reply. You are quite correct in your apprehension of my position and disposition on the wheat-cheat question. When the discussion began I hardly expected that it would be worth while to repeat the often tried experiment of attempting to convert one species of plant into another species, by any mode of treatment or ill treatment whatsoever. But now that I find the injurious delusion to be entertained by a large number of intelligent persons, I consider it part of my official business to do all I reasonably can to remove it, in order that the proper means to deal with this as well as with all other pestilent weeds may be employed by all careful farmers. I therefore cheerfully accede to your proposition to test the matter by crucial experiment, which shall satisfy all candid persons. I shall prepare the sets of planting as suggested by you, whenever the growing season comes, and will then notify you as well as other gentlemen interested, as a committee to report the result. I must object, however, to using in these experiments any other than "scientifically prepared," i. e., boiled soil, which will be certain to be free from "cheat" seed. It being understood that by "cheat" is meant the bearded dandel, or *Lolium temulentum*, commonly so called in California.—EUG. W. HILGARD, University of California, Berkeley.

Notes on Other Correspondents.

EDITORS PRESS:—As the wheat-cheat discussion progresses, I desire, even at the risk of getting tiresome, to "stick a peg" wherever a point is admitted by the believers in the indefinite mutability of species, at short notice. Many have questioned the ability of dandel seed to germinate at all. Now here comes Mr. E. T. Wall and testifies that he is in the habit of sowing that seed for hay; and others have stated their experience to the same effect. Let that, then, be considered settled, and stick a peg there.

Another valuable point given in Mr. Wall's testimony is, that dandel seed "wants to be sown in the wettest ground you have—ground that wheat will drown out on." Now, that is precisely what I have stated from the outset. Dandel seed will sprout but sparingly in dry seasons; it can therefore accumulate in the soil for several years, and then may suddenly be brought out by a season which will place wheat under such a disadvantage that the dandel will easily overcome it. Such is the gist of Mr. Wall's very pointed and practical testimony; and I am only surprised that in the face of it, he still adheres to the superfluous belief in the transformability of the species. As to defunct wheat grains or barley husks adhering to the roots of a bunch of dandel growing where these cereals have been sown, it is the most natural thing to happen, and might have occurred equally as well where hemp or flax were sown. I remember once planting squashes on a plot where lima beans had ripened the previous season; and that when I thinned out the squashes, several of the plantlets came up with lima beans sticking to their roots in the most natural fashion. I tried to convince my little boy

that the squashes had come from the lima beans, but he would not believe in the transformation. It needed only a slight inaccuracy of observation to make of this deceptive appearance just such a "stubborn fact" as many of those, which people unused to close study are apt to flout in the face of scientific observers. Stick another peg, then, to the fact that dandel seed will readily sprout *only* on soil too wet for wheat, and on which the latter would "drown out."

In regard to Mr. Sanders' suggestion that wheat and dandel may hybridize, I will only say that there is no example known of plants so widely different in structure influencing each other *at all* through their pollen. Then, it is clear that by his process, the transformation could occur only the second year; and he must therefore assume that *all* our wheat, barley, etc., is in this condition of unstable equilibrium all the time, through the influence of the dandel pollen. His hypothesis is, therefore, complex as well as without any analogy to support it, and will hardly compare favorably with that simple explanation which assumes nothing that is not strictly in accord with past experience, as well as with all analogy in the case of other plants.

As to Mr. Benson's suggestion that the premature removal of the mother-grain may produce such a change, I agree that the operation would, for the time being, weaken the plantlet considerably. But wheat is yet a long way from being dandel. In order to become dandel, it must obtain an *increased* number of flowers on each spikelet, and instead of several of the flowers being abortive (as is the case in wheat), each one must produce, as is the case in dandel, a well-developed, plump kernel, fully able to germinate and reproduce its kind. This, to say the least, does not savor of "stunting."

It is singular that, like Mr. Lathrop, in the letter above given, Mr. Benson does not think it essential that the soil used in such experiments must be absolutely known to be free from foreign seed. As this is precisely the point at issue, how is it possible to pass by this cardinal condition? As to its "feasibility," I cannot but think that any one enjoying the possession of a wash-boiler will find himself able to accomplish the feat; but it is true that, like all rigorously controlled experiments, it requires more trouble and labor than loose observations, and hasty conclusions jumped at on the strength thereof. A single decisive experiment of this kind has sometimes formed the life-work of a skilled experimenter; and it is the results of just such careful and conscientious researches that the advocates of the wheat-cheat theory are attempting to set aside.

E. W. HILGARD.

University of California, July 27th.

Some Experiences.

EDITORS PRESS:—I have seen considerable discussion in your valuable paper lately as to whether wheat will turn to cheat or not. I have been a farmer all my life and I will relate to you some of my experiences in the matter. I think it was in the year 1848 in northwest Indiana my father sowed two fields to wheat, one of ten and one of twenty acres. Both pieces had been summer-fallowed and replowed in the fall, consequently were very clean. The grain was sown early in September. It came up and looked as well as grain usually did there. The following winter was very wet and when the grain headed out it was all cheat; I do not think there was one bushel of wheat on the whole 20-acre piece.

My second experience occurred in Solano county, Cal., in 1862. I had a field of ninety acres situated in the foothills. One portion of this field was low and liable to be overflowed in an extra wet season. This piece that was overflowed was all clean cheat the next harvest, and the land adjoining that was seeded in the same manner made a pretty good wheat crop.

Again, in 1867, the same piece of land was overflowed, and this time about the half of it was in barley, and when harvest came on the wheat ground and also the barley ground that had been covered by water was both clean cheat. Now, this overflowing did not occur from any land that had ever been cultivated, but from the steep mountain side, where the principal growth was wild oats. Taking these three incidents I am forced to the opinion that wheat will turn to cheat when there is too much water, notwithstanding the contrary opinion of Prof. Hilgard. I do not wish to enter into an argument with him, but I merely give my experience, running over a period of 19 years. I am also slightly engaged in farming still, and have not yet seen anything to change my mind.—T. J. HALL, Big Dry Creek, Fresno county, Cal.

A Foreign Comment.

A writer in the London *Mark Lane Express* says: I notice in the PACIFIC RURAL PRESS an article by C. Alexander on "Wheat and Cheat," in which the writer criticises the opinion of Prof. Hilgard, who, it appears, has declared that "wheat will not turn into cheat any more than a sheep will turn into a goat." But there is nothing in the article which will enable one to determine what is meant by the word "cheat." The term "cheat" is used in this country for "ear-cockle," "peppercorn," "purples," and some other local names for the changed condition of the wheat corn by an animalcule called *Vibrio tritici*, one of the Infusoria. The infected grains become rounded like peppercorns, turning dark green and then purplish black. In the sample they are something like cockle seed.

The starchy contents of the grain are consumed, and their place is filled with a substance like cotton, which, if placed in water, will quickly resolve itself into an incredible number of eel-shaped infusoria, nearly related to the similarly shaped animalcules of paste and vinegar. It is supposed that these *Vibrios* enter the system of the plant by its roots, and complete their development in the ovule. If this is what Mr. Alexander means by the term "cheat," he has a wide field of study awaiting his observation, in which very little has yet been done.

Fifty Dollars for a "Changing" Head.

Mr. J. Allison, writing on this subject to the *Vallejo Chronicle*, says: While threshing my wheat some four or five years ago some of the men told me they had found a number of wheat heads that contained both wheat and cheat. I offered \$5 for one head and one of the men drew some heads from his pocket, which on close examination were found to contain no seed whatever. They were simply blasted heads of wheat. The gentleman in charge of the machine then informed me that he had found a head which contained both the previous year. I told him when he found another I would give him \$50 for it; but he has not yet succeeded in finding it.

I have been a farmer for 50 years and have never seen a bushel of wheat or barley that did not contain more or less cheat. A few years ago a gentleman told me he was now convinced that grain would turn to cheat. For he sold a farmer seed barley which was perfectly clean, and when it came up there was a fair crop of cheat on the low places. I went with him to his barley bin, took up a handful of the barley, and separated the cheat from the barley. There was enough cheat to have thoroughly seeded the ground, provided the barley had all perished. I called his attention to it and he acknowledged he had been deceived.

Mr. McReynolds says many of his neighbors are of his opinion that wheat turns to cheat. Some in this section go still farther. One of our leading wheat buyers says he bought clean wheat, and it was rejected in market on account of too much cheat. So he says it must have turned in the sack while on the way to market.

THE STABLE.

Breeding Horses in California.—No. 7.

[Written for the PRESS by JOSEPH CAIRN SIMPSON.]

The thoroughbred sires on the Pacific Coast are numerous in comparison with the mares, and nearly all the prominent families are represented. There are four imported stallions, *i. e.*, brought from England, and the explanation of the abbreviation "imp." which puzzles so many, has reference to horses brought from a foreign country, though here it is frequently used to designate those which have come from the States. In England they translated it imperial, and the construction has led to many errors. The English horses now living and kept in California are Young Prince, Hercules, Time and Partisan. Young Prince is by Knowles, a son of Stockwell, his dam by King Tom. Hercules by Kingston, his dam by Bay Middleton. Time by Cambuscan, his dam by Jordan, and Partisan by Tomahawk, his dam by Sugar Plum. This quartette are all large horses, of great substance, and the two first named are of the most fashionable blood of the countries in which they were bred.

It is a remarkable circumstance that the only known living sons of the famous Glencoe are owned in California—Rifleman in Tehama county and Crichton in Los Angeles county. There are three sons of Lexington in California and two in Oregon—Norfolk, his dam a Glencoe mare, owned by Theodore Winters; Bayswater, out of Bayleaf by imp. Yorkshire, belonging to Mr. Merrit, of Santa Rosa; a brother to Barney Williams, owned by E. J. Baldwin—the latter a two-year-old. The Oregon horses are Dr. Lindsey, a brother to the dam of Parole, and Luther by Lexington, his dam by Glencoe.

Every one of these, with the exception of Bayswater, combines the Lexington-Glencoe blood which has proven to be so good in the first and second generations, and is likely to sustain a prominent place in the stud books and racing calendars. There are many descendants of Lexington in California which were bred here. Imported Australian has several sons, *viz.*, Wildfire, his dam Idlewild by Lexington; Rutherford and Leicester also out of Lexington mares, and Joe Daniels, his dam Dolly Carter by Glencoe. Planet is represented by Hubbard, out of Minnie Mansfield by Glencoe. Ringmaster has Hock-Hocking, out of Young Fashion; Grinstead is by Gilroy, out of the sister to Ruric; Monday by Colton, out of Molly Jackson by Vandal; Glen Dudley by imp. Genel, his dam Madame Dudley by Lexington; Three Cheers by imp. Hurrah, his dam Young Fashion, and there is a two-year-old by Monarchist, a yearling by Genel, and probably others brought from the East which I have overlooked. Lodi by imp. Yorkshire, his dam Topaz by Glencoe, is a large fine horse bred by John M. Clay, of Kentucky, and brought here several years ago. This list shows that the Pacific Coast is bountifully supplied with the very best blood of the East, and to mix with that is what might be termed the old California blood, descendants of Belmont. Don Victor, a

son of Belmont, and the only thoroughbred one to my knowledge now living, for there is a slight flaw in the pedigree of Venture, one thirty-second part of his blood unknown; but there are Thad Stevens and Waterford by Langford, grandsons and horses which distinguished themselves for speed and endurance.

It is a safe assertion, that with the single exception of Kentucky there is not a State in the Union which can show as many fine thoroughbred stallions as California. Were the mares in the same proportion they would be likely to be desired to perfect the opportunities for breeding race-horses here. Though a very good showing can be made they are scarce in comparison with the stallions. Theodore Winters, of Winters, Yolo county, and W. L. Pritchard, of Sacramento, have studs which will compare favorably with those of the East. Mr. Winters has several which should prove the equal of the best and some which have been tried and came up to a high standard. The dam of Molly McCarthy and Ralston died last spring, but there is her daughter Ballerina by imp. Balrownie to perpetuate the strain. Jas. E. Chase, of San Francisco, has also two daughters of Hennie Farrow, Mayflower and Electra, by imp. Eclipse. Among Mr. Winters' broodmares are Margretta by Lexington, the dam of Waterford and Bradley; Golden Gate by imp. Leamington; Mattie A. by imp. Australian; Marion by Malcolm; Maggie Dale by Owen Dale; Rosewood by Woodburn; Kitten, by imp. Eclipse, out of imp. Pussy by Diophantus. These, with many others scarcely inferior, make a good showing for one breeding farm. Mr. Pritchard has Tibbie Dunbar by imp. Bonnie Scotland; Flush by Hiawatha; Addie A. by Asteroid; Sophia Jennison by Jack Malone; Lottie Lee by Derby J. Tibbie Dunbar is the dam of Lena Dunbar, and Sophia Jennison the dam of Molly H. Henry Schwartz, of San Francisco, has Virginia by Revenue, and her daughter Jennie C. by Norfolk, the dam of Mark L. John A. Cardinell has a sister to Henry by Norfolk; Abbie W. by Don Victor; and Mamie C. by imp. Hercules. R. O. Neil, of San Francisco, has Annette by Lexington, and her daughter Camilla Urso by Lodi—the former the dam of Chance and Carrie H., the latter, the dam of Raven. Messrs. Coombs and Coghlan have a large number of highly bred mares, and the owner of Wildfire, H. Judson, has several. Ex-Gov. Stanford has Sally Gardner by Vandal, with other thoroughbreds. Hon. Jas. Mee has Katie Pease; Jos. Cairn Simpson, Lady Amanda by imp. Hurrah; and E. J. Baldwin has Josie C. and several young fillies, which will be placed in the stud when their racing is over. J. B. McDonald, of Marysville, has Lexington Belle by Lexington, Cordelia by Planet, and a Glen Athal filly. L. Dubois brought from Kentucky, last spring, some very highly bred fillies by Longfellow, Tom Bowling, Enquirer and Waverly. Judge McShafter has some fillies, which Captain T. G. Moore sold him, by War Dance and Bayonet, and others are scattered over the State. But if all were enumerated, the mares are not in proportion with the stallions, though there is fully as great a variety of blood. Leamington and his son Enquirer are only represented here through the female line, which is also the case with Longfellow, Tom Bowling and imp. Eclipse. There are a few Belmont mares left—Pele, owned by Capt. Geo. A. Johnson, of San Diego; Bonnie Belle, by Wm. Meeks, of San Lorenzo; and Miami, the property of Mr. Boots, of San Jose. These are finely-bred mares, and their offspring will perpetuate the "old blood." There are a number of other mares scattered over the country, but this exhibit shows that there are enough to make a selection of the different strains an easy task. It is a good foundation, and when supplemented by others of the "fashionable families" of the East, the procreative animals to raise first-class race-horses are not lacking. I have written without reference to books and papers, and the above list comprises only those which came to mind as I wrote, and necessarily I do not claim it to be anything like a full record. In the next paper the mingling of the blood—the nicking—which has resulted in the cracks of this country and the East, will be considered, and, after that, the care which is essential and the manner of rearing, so that the embryo may grow into the desired animal.

THE APIARY.

Drone Eating Birds.

EDITORS PRESS:—Seeing an article in your valuable paper on bee killing birds, by J. J. Simmons, and thinking he is laboring under a mistake, will try to correct him a little, although he has been in the business longer than I have.

First, drones do not fly in the forenoons; what do the birds do for breakfast?

Second, the "bee martins" never catch any thing while flying from the hive, but always on the return when loaded with honey.

I was first called to notice the king bird or "bee martin" of California in 1875.

I lost a large per cent. of queens on their bridal tour; perhaps 40 per cent. I borrowed a gun and shot some less than 100 and had good success as long as I shot them. I took notice of their actions and saw them catch bees by the dozen in the evenings when drones were in bed. The martin is not the only enemy of the bee.

The blue jay last year was a terrible enemy of the bee, but it was owing to the dry season, as I have seen nothing of it this year. The skunk or pole-cat is the worst enemy we have to contend with, as he always comes in the night, raises up, sits his paws on the perch, scratches, and out comes the bees, and cover him all over. Then his skunkship rolls over in the dirt, killing some, getting others tangled in his long hair, thus he has his feast, picking them off. One can tell by the looks of the hive when they are about by the hive being dirty, and the ground torn up in front or scratched out, leaving a hollow. A little strychnine in a piece of honey is a sure cure. HYBRID.

Ventura county, Cal.

THE DAIRY.

Forage Crops with Liquid Manure.

EDITORS PRESS:—I noticed in your last week's issue that you desired to hear further from me in relation to my system of fertilizing my land with liquid manure. You know that I have underground iron pipes to convey water from a large reservoir in the hills, to distribute it over about 150 acres of land gently sloping from those hills to my dairy barn.

My dairy barn holding 300 cows is located on the most elevated part of the fields to which I apply the liquid manure, so that I can sluice out the barn twice a day, after the cows are turned out. The sluice water runs from under the barn floor into a pit just outside of the barn, and from there it is conducted in V troughs all over the field. The troughs, about 16 feet long, are simply set in a V notch in a short piece of 2x4 scantling, and the end of one trough supports the end of the next one. These are run out for half a mile now, and a strip of land, say 20 feet wide, is irrigated before moving the troughs. One man can manage the whole thing and cut out weeds, or cut grass, or load grass on wagon near his line of trough, while irrigating. He commences at the upper end of his line of trough and puts in a block of wood say six inches square and two feet long into the trough cornerwise, and thus causes the liquid manure to overflow the trough above him for a space of five to fifteen feet. It is allowed to run until the soil is thoroughly saturated thereabouts; and then he moves his block five to ten feet further down. Streams of water are added through hose along the line of the trough, to reduce the strength of the liquid manure, that the grass may not be killed, but I find that grass will stand almost any application that could be made.

This plan I have practiced all this summer, and cannot find any improvement on it. I have been perfectly astonished at the vast amount of green feed my fields have furnished this season. I have cut three heavy growths of rye grass this season on the parts of my fields that were well fertilized before irrigation; and where irrigated my fields are green now, and furnish a constant supply of green pasture of rapid growth and of great value to a milk dairy supplying the city with milk, as grass will impart a flavor more desirable than that from any other food.

I have seen many articles of late in your paper concerning the best method of securing the best and most economical manures. Some recommend a pit in which to throw everything and then run drains and water into it to rot it. I tried the same method two years ago and found that manure will not rot under water, and that getting the water and manure out of the pit was an expensive matter, although I had a drain from my pit to draw off the liquid manure.

My method now is, to stack up all the droppings about the barn, lanes, corrals, etc., almost daily, into a pile several feet high. Then give it a thorough wetting from a hose and allow it to decompose for a few weeks. Then chop it down, mix thoroughly and stack it again; then wet it well once more, and after a few weeks it will be ready to put upon the field. It is applied about the time of the first rains, when the rain will wash it into and incorporate it with the surface earth, giving a mulch to the grass, that will not only start a vigorous growth, but prevent the surface from baking in hot weather and the rains from being shed from the field in winter.

This process of composting destroys all weed and other seeds, prevents the manure from burning, as well as the escape of volatile parts, especially when a loam or sand is intermixed when stacking it. I have thus made compost, suitable for the finest garden, at a moderate expense, and I can assure any one that will try it that it will pay a larger profit than any other farm labor.

I am now erecting buildings on the back part of my ranch for a second dairy to accommodate about the same number of cows as the original one, and which are nearly completed. The same system of applying liquid manure is being adopted, and water is being brought one mile in iron pipe, with a head of 100 feet—that will fully supply the place—and when you are at leisure and desire some country air, I will be pleased to show you the progress that is being made on Jersey farm.

R. G. SNEATH.

[Thanks for the information and invitation. We shall be pleased to see the improvements and enlargements at some early day.—EDITORS PRESS.]

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Worthy State Lecturer's Appointments.

Name of Grange.	County.	Time.
Northeast	Modoc	Monday, August 5th
Modoc	Modoc	Wednesday, August 7th
Davis Creek	Modoc	Saturday August 10th
Crescent City	Del Norte	Wednesday August 14th
Rivellutah	Humboldt	Saturday, August 17th
Sable Bluff	Humboldt	Monday, August 19th
Ferridale	Humboldt	Wednesday, August 22nd
Mattole	Humboldt	Friday, August 24th
Cahto	Mendocino	Tuesday, August 27th
Potter Valley	Mendocino	Thursday August 29th
Lakeport	Lake	Saturday, August 31st
Gloverdale	Sonoma	Monday, September 2d
Healdsburg	Sonoma	Tuesday, September 3d

"Women's Rights."

EDITORS PRESS:—You lately printed a letter entitled, "A Plea for Women's Rights." This is as it should be. The forthcoming convention can entertain no question of greater import than the enfranchisement of the Granger matron and all others of our disfranchised sisters. The Workingmen and Non-Partisans have now an opportunity of winning praise and fame by inaugurating a principle which must sooner or later prevail. All honor to the noble women engaged in securing the rights of the whole.

Taxation of Land by Grade.

Let the above principle be kept in public view, so as to secure the attention of the Convention; cultivated or uncultivated, the grade of soil and ownership being the test of value of taxation. In fact, idle land should be under "arrest for vagrancy," as it is just as capable of being utilized for many uses as the most highly cultivated. And if one speculative owner refuses to accede to the general demand, willing hands are ready to take his place, increasing the amount of production and lessening the number of tramps and dependents.

Sacred edifices—so-called—should also be subject to taxation. No distinctions should be made in any class of property or calling, which represents wealth. Equalize princes and paupers by just legislation and faultless constitution, and California will become an example for the older and less go-ahead States to follow.

Let our Granger brethren endeavor to exercise that influence for just reforms, which their high position assigns them. The eyes of the State's yeomanry will be upon them, when they exercise their functions as representatives of the farmer, the matron, and toilers generally.

JOHN TAYLOR.

Mount Pleasant, Cal.

A Lecturer's Reflections.

In an address before West San Joaquin Grange, some time ago, the W. L. Mrs. J. M. Kerlinger, gave the following reasons for effort among Grangers:

Worthy Master: It did not seem at first thought a hard thing to make a few remarks now and then, still easier to find something good and appropriate to read before the Grange. But after a little reflection I feel my incapacity for the work so much I am strongly tempted to make no effort at all. It requires more humility to present a small offering or make a feeble effort than to do nothing.

I realize that a competent person in this chair could do a great deal for the interest and prosperity of the Grange. With some leisure, access to a good library, new books and papers, opportunities for hearing lectures, and so keeping wide awake and abreast of the times, and, best of all, possessing that rare faculty of interesting and bringing out the latent talents possessed by each member of the Grange, such a rich intellectual feast might be set forth for you here that few obstacles would prevent every member being present to enjoy it. The old excuse of one talent only, and many others I can find, fail to satisfy my conscience, which says it is the part of a good patron to do the best he can at any post he may be called to.

A short time ago I happened upon a paragraph that ought to encourage all who fear their efforts to do no good. It was this: "A warm blundering man often does more for the world than the frigid wise one." One who gets a habit of inquiring about proprieties, and expediencies, and occasions, often spends his whole life without doing anything to purpose.

Three months ago when our new officers were elected, our Grange in sympathy with the desolate landscape and gloomy outlook was in a languishing condition. Indeed to keep it alive the coming year seemed to be the question.

During the first few weeks, when hope seemed well nigh gone, I often thought of trying to offer some words of hope and courage. But words seemed so powerless at a time when, unless Providence speedily interfered, we should all be compelled to take our stock and set out for pastures new.

It is much easier to speak hopefully, to say "courage, courage," now when the abundant rains have made the glad earth smile all over in growing grain and blooming flowers.

Do we feel grateful as we should for this welcome change? Even those who fail to

acknowledge a guiding Providence in the little every-day affairs of life, instinctively look to a higher power in great emergencies. Even avowed infidels call upon God when the prospect of immediate death stares them suddenly in the face. But how seldom do these return thanks when some apparently mere chance averts the expected calamity. Our Grange rituals all acknowledge a divine Master who rules over the destiny of man. May it not be in form only we recognize him, but may we all indeed have a deep and abiding confidence in that all-wise, loving father. And while we rejoice in the sunshine and the rain, let us not forget to give thanks.

With all nature waking up to renewed life our Grange ought to revive, and as trees take on a larger growth in a good year, so ought we to mark the present by an advancement that shall show on the records of time.

If we are not yet prepared to co-operate and thus secure the financial benefits of our Order, we may at least improve its social features, become better acquainted and thus gain confidence in each other, without which no co-operation is possible. The true spirit of fraternity works for the general good, and is ready to heartily push forward any measure for the benefit of the whole, whether it sees any gain coming home to itself or not.

AGRICULTURAL NOTES.

California.

BUTTE.

THE JONES DRIER.—*Record*: Gen. Bidwell has in operation the Jones drier, invented by Chas. W. Jones, formerly of Michigan, but now of Solomon City, Kansas. The drier or evaporator is capable of containing 228 trays, which gives a drying surface of 3,700 square feet. Four chambers run the full length, and the additional openings which have been made facilitate the handling of the fruit greatly beyond that of last year. The hands, some 35 in number, which will be shortly increased to 50, are working only 11 hours each day, and in that time between 300 and 400 baskets of peaches, averaging nearly 20 pounds to the basket, are thoroughly dried. The average time of drying is estimated at about six hours. The hot air, 200°, is furnished by two furnaces in the basement, and a six-horse power engine drives a powerful fan which puts the air in circulation through the evaporator. Mr. C. F. Decker is General Superintendent, and seems to be the right man in the right place.

GRAIN YIELD.—*Register*, July 26: M. C. Smith, farming near Chico, in this county, and just through threshing, reports his crop of wheat at 2,200 sacks. On the same land, last year, 4,800 sacks were produced; a falling off from last year's yield of about 60%. Mr. Robert Moore, from the Feather river land, brought into our office yesterday a sample of wheat raised on his ranch, of the Genesee variety, and although the berry is plump and handsome, it is not by one-third so large as the same variety was last year, and the yield but one-half so great. The above are very fair samples in yield of what are known as our most promising looking crops, and on our best alluvial soil, the character of land least injuriously affected by our past wet season, as we figure it here at home.

COLUSA.

SHRINKAGE.—*Willows Journal*: Not more than half a crop of grain has been raised between Willows and the southern end of Colusa county. A gentleman who has visited most of the farmers between here and Williams, the past week, says every farmer's grain had been damaged from one-quarter to one-half the crop, and considerable shrinkage was reported.

CONTRA COSTA.

THRASHING ENGINE COLLAPSE.—*Gazette*: Heudrick & Coates' steam threshing engine collapsed a flue near the Point of Timber last Saturday, and a young man named McDonald who lives near Pacheco, was considerably scalded by the escaping steam, but not severely, as we learn. It is said that one of the gauge cocks was broken and the collapse was probably caused by the water having been evaporated so as to leave the flues uncovered.

GLORIOUS HARVEST.—*Antioch Ledger*: A ride from Antioch to Point of Timber, or westward to the Diablo range of hills, will convince the most skeptical that the wheat crop of this portion of the county is unusually large, and that with good tillage, even with a moderate rainfall, we can make as good a showing as most of the wheat-growing counties of the State and far better than many of them. Steam threshers are now in active operation on every hand. The kernel is plump, there is no rust or smut and farmers generally are realizing all they hoped for at seed time. The impression abroad that Antioch is largely dependent upon the coal interests for support, although in a measure true 12 or 15 years ago, is far from being a fact at the present time. In fact, prior to the building of the Empire road, but little coal has been shipped from Antioch for some 13 years. We are dependent upon an agricultural country for support and as the years go by and our lands are compared with other farming districts, our farmers are content with the location. A better class of houses and barns are being built each year in place of the temporary buildings of the "settler." Orchards, vineyards, shade trees, shrubbery, etc., are everywhere to be seen, and the fact is being realized that our

farming lands with thorough cultivation are not inferior in quality, and should not be in market value, to any land in the State with equal facilities for transportation of products and nearness to the market of the metropolis.

FRESNO.

COUNTY STATISTICS.—*Expositor*, July 18: To John A. Stroud, our obliging County Assessor, we are indebted for the following county statistics, as demonstrated by the assessment roll, for the fiscal year 1878-9. Land of first grade, being land with facilities for irrigation: Number of acres, 101,071; valued at \$549,464. Land of the second grade, being farming lands without irrigating facilities; number of acres, 60,978; valued at \$207,662. Land of the third grade, being grazing lands of good quality; number of acres, 911,941; valued at \$1,824,054. Land of fourth grade, being grazing land of poor quality: Number of acres, 547,395; valued at \$810,531; or a total of 1,621,385 acres of land of all grades, with a value of \$3,391,711. The improvements on this land, including railroad, are valued at \$235,524. The value of town lots is \$89,895, and the improvements on same is fixed at \$97,167. Improvements on all land assessed to other than the owners of the land is \$103,065; or a total for land and improvements of \$4,410,222. The personal property foots up in value, \$1,460,855; making the value of all taxable property, \$5,871,107. There were assessed 915 wagons; of horses, 251 were American, 2,102 were half-breed, 1,081 Spanish, and 735 colts. The cows comprise 352 American, 1,265 mixed, 102 Spanish, and 656 calves. Stock cattle, 15,946; beef cattle, 600; goats, 5,474. There was not a fine or graded sheep in the county, but 383,177 common sheep were assessed. Mules, 418; oxen, 240; hogs, 21,177; bee-hives, 25. Of grain, 100 tons; and 381 tons of hay are reported. There were 334 sewing machines; 295 watches, and 52 musical instruments on the list. There are 642 dozen of poultry in the county, and the rolling stock is assessed at \$200,170.

NEVADA SETTLEMENT.—*Expositor*, July 24: Our reporter visited the "west end" of the C. C. colony a few days ago. This should properly be called the "Nevada Settlement." The place worked by Henry Webster shows the handiwork of a practical farmer; W. S. Patterson is making a success of W. H. Armstrong's tracts, and proving, conclusively, that orange culture is bound to succeed. R. J. Harrison's lot looks too handsome for an old bachelor. Flower beds are tastefully laid, bordered with blue grass, intermingled with canna rubra, while a gigantic caladium spreads its broad leaves to the public gaze. His lemon and orange trees are growing luxuriantly, with a good prospect of fruiting this year; his pear trees are loaded with fruit; the grape vines and the alfalfa, of course, are doing well—even his hogs are bearing fruit. The tracts of Mrs. Cain and Mr. Gordon show great improvement. Here, as everywhere on the colony, may be seen large areas planted with Egyptian corn. But talking of Egyptian corn, on one of the tracts in charge of Mr. Harrison are nine acres of Egyptian corn which is simply immense. Standing on the levee and looking at the sea of corn spread out in every direction set our reporter to figuring. Estimating the corn to be planted 2x2 feet, and allowing one pound of corn to a stalk, would give 10,890 pounds of corn to the acre, or about five tons of corn to the nine acres. This, too, is only the first crop, with the prospects of another full as large, and maybe, still another.

VALUE OF SHEEP.—In spite of the fact that the sheep in this valley have fallen off more than one-half in number during the past year, they still remain low in price. During the past week sales of good sheep are reported at from \$1.05 to \$1.33 per head. It is only occasionally that a higher price is paid. The hard experience of last year seems to deter many people from buying, and served to induce many of those who have heretofore been largely engaged in the business to sell at most any price.

KERN.

LARGE LAND SALE.—*Visalia Delta*, July 26: John H. Redington and H. P. Livermore have sold their large land interests in Kern county to Messrs. Haggin & Carr, and Miller & Lux. We learn that the former parties have sold all of their slough and lake land to the latter, and also the tract known as the Souther ranch, a tract amounting in all to 32,000 acres. It is thought that Miller & Lux have bought this land to pasture cattle on. If this be the case, it will make a great difference in that locality, and will be a great disadvantage to Kern county. Mr. Souther has spent nearly \$1,000,000 on this ranch, and has converted it from an apparently barren tract of land into one of the best cultivated and most productive farms in the State. Messrs. Miller & Lux are part owners of the Buena Vista Slough canal, 26 miles in length, running from Buena Vista lake towards Tulare lake. They also own the land along Buena Vista slough, from the present terminus of the canal to Tulare lake. It is generally supposed that they intend to continue this canal to deep water in Tulare lake, 18 miles further. From the northern end of the lake to Cold slough, about 15 miles, a canal would have to be dug. This slough is deep enough for boats for 10 miles, and then a canal would be required through the tules to Tule slough, about eight miles, thence through the slough to the Kings river and San Joaquin canal. This canal, belonging to Miller & Lux, is 60 miles in length to Orestimba. From here

it could be extended to Bantas, about 40 miles, by way of Grayson, thence to Antioch. There are no natural difficulties to prevent the successful working of this canal, once it was completed, and no serious obstacles to prevent its construction. If this canal were now in working operation, it would result in a reduction of the cost of freight to tide water from twenty or thirty to three or four dollars per ton, and would effect the rapid settlement of the west side of the valley and bring thousands of acres of land under cultivation that in its present condition is unfit for anything.

LAKE.

THE SEIGLER STOCK RANCH.—*Lower Lake Bulletin*, July 18: The Seigler Springs stock ranch is one of the best in lake county, and mineral water appears to be beneficial to animals as well as men. The range is an excellent one, well sheltered by timber, and the warm water produces plenty of vegetation in cold weather. Mr. Hayward has taken advantage of the location and has about 40 head of fine Durham cattle. The stock was originally brought by him from San Mateo county. One of the short horns, on one occasion, took the first premium at the State fair in Sacramento.

LOS ANGELES.

SAN FERNANDO VALLEY.—*Editors Press*: I write you the condition of the wheat crop in this valley. There will be a good crop on all the early sown; the late sown in some parts will not be worth cutting. I have in 2,400 acres of wheat, of which about 1,500 is good, and the rest is good in spots. I have 300 acres of barley, which is good; 60 acres of corn, which is good. I am heading at present. I will let you know how it turns out when I begin threshing. A. WORKMAN.

MENDOCINO.

HOP PRUNING.—*Ukiah Press*, July 26: From Captain J. F. Coburn, who has had considerable experience in raising hops, we learn that the prospect is very good, both as to quality and prices. He tells us that his crop was never better. He is of the opinion that hop growers make a mistake when they prune closely, and substantiates his opinion by illustration. Last year he pruned several acres very closely, and the result was not a vine made its appearance. This year the same piece of ground produced the heaviest crops, and the vines were not pruned at all. He thinks this is sufficient argument to prove that too snug pruning is an injury.

MONTEREY.

HARVEST.—*Index*, July 25: The wheat harvest is now in full blast and turning out better than was expected. Fields that it was thought would not pay for cutting and threshing, are yielding from 10 to 12 sacks per acre, and upwards. While much of the wheat will not come up to the shipping standard, yet it will make excellent flour. There will, nevertheless, be a large amount of shipping wheat in this valley. The prices offered range from \$1.20 to \$1.37 per cental.

CHINCH BUGS.—S. N. Wyckoff informs us that chinch bugs have destroyed about 25 acres of his wheat in San Miguel canon. He is also of the opinion that these bugs have damaged considerable wheat that was generally supposed to have been affected by rust here this season. They crawl up and down the stalks of grain, sapping the life and substance out of it. Chinch bugs occasionally commit fearful ravages in the wheat fields of the Atlantic States, but we believe they are a novelty here.

NAPA.

THE GRAPE CROP.—*Register*: There is every prospect of a heavy yield of grapes this year. Though mildew has appeared in the neighborhood of St. Helena and Yountville, the prompt application of sulphur will prevent it from materially injuring the crop. Last year the grape crop was light in this valley, and there were a great many young vines in bearing for the first time. This season the old vines are heavily loaded and the yield of the young vines of last year will be greatly increased because of their maturity and the favorableness of the season. Mr. Terrill Grisby, of Yountville, thinks that wine men will be able to pay from \$3 to \$5 per ton more for grapes this year than last.

SACRAMENTO.

THE SEASON AND ALFALFA.—*Record-Union*, July 24: There is a general complaint in this vicinity among farmers who have alfalfa meadows and pastures, that the alfalfa will make but a slow and unsatisfactory growth this year. Even old and well established fields grow slowly, and the clover looks puny and stunted. We think the cause undoubtedly is to be found partly in the condition of the soil and partly in the condition of the weather. The rains were late in the season, and were very heavy and cold for the time of year. At the time alfalfa is generally starting out vigorously, this year it had not shown a green leaf. Then at the time the roots were soaking in cold water; about the middle of April we had two or three days of very hot weather—the sun being very hot and scalding. At this time the crowns of the plant were scalded and injured so that they were very slow in starting, and even having started in consequence stunted. The effect is similar to flooding and allowing the water to remain just over the surface while the rays of the sun are very hot. The water becomes so hot as to scald the root, and while it may not quite kill it, it renders it weak and makes the growth slow and sickly. Clover sown this spring makes a more vigorous growth generally than that that lived over the winter. Then again farmers will notice that, although

the soil a few inches down is yet full of water, the surface is very dry and baked. This not only pinches the stems that are out of the ground, but acts to prevent stooling or branching from the head. It will take all this year for the plant to recover the healthy condition it had before the set back of last winter and spring. This has not been a good summer for alfalfa anyway. Alfalfa is a native of a hot, dry climate, and thrives best in our warmest and driest seasons. It never did better with us than it did last season. This was generally remarked.

SAN JOAQUIN.

A WEST SIDE TRANSACTION.—About four months ago a grain dealer of this city advanced seed and feed to a West Side farmer to put in a quarter section of land. The wheat crop resulting therefrom was all shipped last week and the producers have got their money for it. The crop amounted to 85 tons, or an average of 20 bushels to the acre, there being about 20 acres that were drowned out by the overflow of a mountain stream. The crop brought on the river bank \$2,587, of which the farmer received three-fourths. His entire expense of putting in the crop and taking it off was less than \$500, leaving him a net profit of about \$1,500. The grain dealer advanced but \$274, in seed and feed, and his share of the proceeds of the crop was \$672, a very fair percentage of profit as the interest of the sum loaned for four months. Strange to say the land will not sell for as much as this year's crop brought, owing to the uncertainty of crops in that section, but the large profits from this transaction go to show the possibilities of the West Side farms with irrigation assured. A canal would bring the land up to a fair valuation, but at present all real estate is depressed and uncertain in that section of the valley.

SANTA BARBARA.

KEEP IN THE ROADS.—*Guadalupe Telegraph*, July 27: Now that the crops have been cut, harvest hands and others are making it a practice to ride and drive "across-lots" through the stubble. This is entirely wrong and must be stopped. To say nothing of the tramping down of the stubble and field-ground, there is great danger of the straw being set fire to by cigar stumps and cigarettes thrown away by such parties. Our farmers are generally complaining of this criminal practice, and they should see that there is an end put to it at once, before greater damage is done. All persons who ride or drive across the grain fields of another are liable to punishment by law, and we trust that our farmers will not hesitate to make an example of these trespassers. There are plenty of good roads running in every direction through the valley, and people have no excuse for damaging others by going outside of them. A few arrests and fines would be very apt to break up this pernicious custom.

SANTA CLARA.

ENRIGHT ENGINES.—*Salinas Index*: We visited the ranch of Mr. Chamberlain to see the operation of his new threshing machinery. Mr. Enright, the builder of the engine, was on the ground during our visit, giving some instruction in regard to running the machine. He informed us that he had sold 30 of his new straw-burners in California this season—six of them in Salinas valley—and sent two to Oregon. He is building up a good business and deserves it, too. His price for the latest improved 20-horse power straw-burner is \$1,600.

CROP PROSPECTS.—*San Jose Mercury*, July 25: The grain yield of Santa Clara valley this season promises to be equal if not slightly in excess of the average for the past ten years. The early sown grain will pan out finely, but the late sown will not meet the expectations entertained early in the season, on account of the rust, which has generally affected it. The wheat crop will not prove as valuable for this reason, in many localities, the rust having nearly ruined it. Barley and oats will come out all right, and, generally speaking, the farmers will find the outcome profitable and satisfactory. One of these days our agriculturists will learn wisdom and instead of waiting until the last moment, will have the seed under ground as soon as the early rains have sufficiently moistened it. It is only those who planted late in the season that are now disappointed at the result. In no case, however, as far as we have ascertained, will there be any failure to meet expenses. Those who growl are the ones who counted upon a rich harvest, while the result fell somewhat below their anticipations.

SISKIYOU.

Yreka Journal, July 24: At Hamburg Bar Kittlewood & Co. will soon be ready for work, and Morgan, Ramus & Taylor are still taking out considerable dust. The Pacific mine at the mouth of Humboldt, on the Klamath, begins to prospect good, and lots of gold will soon be realized, as soon as the main channel under the river on the bed rock is reached. In a short time the Empire quartz mine on the Klamath, near Humboldt, will be heard from, as the new mill will shortly be in operation, Clay Brown having delivered the turbine wheel last week. We hear it reported that good prospects have been discovered in the Klamath mine on Salmon river, and that A. M. Johnson has also struck it rich in his ledge, near Mugginsville in Scott valley. Two more quartz ledges have been found lately in the Oro Fino Hills, Scott valley.

Union, July 27: We learn from Mr. Washmith that the mines at Orleans Bar have paid very well this season, and the prospect for next season's work is equally good.

SOLANO.

THE COMING FAIR.—*Tribune*, July 27: From Mr. J. E. Williston we learn that all the arrangements for the coming fair are progressing satisfactorily. From what he has seen of the disposition of the farmers while traveling through the country, he believes they will send exhibits and attend themselves more generally than any previous year. The Pleasant Valley fruit growers are expected to be well represented, and also the owners of fancy stock.

HARVEST NOTES.—J. R. Wolfskill is making an addition 70 feet to his warehouse on the V. V. R. R., opposite Winters. The old part had a capacity of about 1,800 tons, and is already full. Grain on the Solano side of Putah creek near Winters is turning out very well—11 or 12 sacks to the acre. This region escaped the rust which struck the grain so heavily down the creek. In the southern part of the Montezuma hills, near Collinsville, grain turned out extraordinarily well—17 or 18 sacks to the acre. Around Rio Vista, however, the yield was much lighter.

SONOMA.

HARVESTING.—*Democrat*, July 27: The major part of the grain in this vicinity has been cut, and now the familiar sound of the threshing is frequently heard. John Richards threshed the grain cut from 15 acres of wheat and eight acres of barley, and has 138 sacks of wheat, 100 sacks of cheat and 113 sacks of barley. On inquiring what use the cheat was he informed us that he seeded the low damp land with it for hay, and intimated that it was a common practice among the farmers here. Mr. Lowery has the only threshing machine that is to be found in this section, and tells us that he has been obliged to turn away a number of persons that want threshing done, as he has so many engagements. He is at present at work in the neighborhood of Robert Crane's. He seems to think the grain as large and plump as it ever was. Oats that he threshed on the Austin ranch average 109 lbs. to the sack, wheat 140½, and barley from 108 to 115 lbs. There is a good deal of cheat to be found amongst the wheat and considerable of the grain is foul.

THE SHAFER COOKERY PREMIUMS.—*Marin Journal*, July 25: One of the most interesting and profitable features of our district fair, which will open September 23d, will be the competition for the cookery prizes, given by Hon. J. McM. Shafter. It is not too much to say that these premiums will confer a larger benefit than all those offered by the Society. The competitors this year will be numerous, and every young lady who strives to take one of these prizes will be benefitted by the effort. Mr. Shafter's offers are as follows: Premium of \$50 for the best wheat, and rye and Indian bread, and sponge cake. Premium of \$20 for the best meat soup, or fish chowder. Premium of \$20 for the best cooked dish of baked pork and beans. Premium of \$20 for the best exhibit of salad.

STANISLAUS.

RIDDING A WAREHOUSE OF WEEVIL.—*Modesto Herald*: Mr. Garrison Turner, president and manager of the Modesto Grange company, has at length got rid of the weevil in the large warehouse belonging to the company. The first application of lime having failed in ousting the vermin, the first floor was raised, the second floor covered half an inch thick with a mixture of lime and concentrated lye—28 barrels of lime and a large quantity of lye having been used in the application—the first floor was relaid and treated in the same manner. This process effectually killed the weevil, and none are now to be found in the warehouse. The Grange company have sold 140,000 grain sacks this season up to date, and have 40,000 more in store. They have shipped about 700 tons of grain this season, and have about 300 tons in their warehouse. The shipping season has not fairly opened yet, grain coming in very slowly.

IMPROVING.—*News*, July 26: Every week's continuation of the harvest season but the stronger convinces us that the grain yield of our county will this year be larger than ever before produced. In all the central parts of the county the yield is much larger than was expected by our farmers. Many of them tell us it is the heaviest crop they ever harvested from their lands. The eastern or foothill section of the county, where the land is generally heavy and strong, is fully up to an average. The West Side is also, as a whole, doing very well.

TEHAMA.

PLENTY OF FRUIT.—*Susanville Advocate*, July 26: From a close observation of the orchards and from what we have heard from different parties, we are confident that the fruit crop in this vicinity will be abundant. This will be a great benefit, as the reputation of Susanville and Honey Lake fruit is so well established that it finds a ready market, and affords quite a revenue.

PROLIFIC VINE.—In the garden of Mrs. A. E. Ward is a remarkable grape vine which extends over 40 feet in one direction, covering an arbor of that length. In the other direction it climbs over 30 feet to the roof of the house and the branches of a willow tree, and throughout its entire length is loaded with clusters of grapes, giving promise of abundant harvest.

MORE SHEEP.—D. C. Wheeler returned from Oregon on Tuesday, bringing 2,500 sheep and has another band of 3,000 which will be here in a few days. His intention is to bring a large band of cattle in the fall, and thus be able to supply Reno and other markets with beef and mutton.

News in Brief.

PERSIA is to have her first railroad.

PRESCOTT, A. T., has a new theater.

J. A. PHILLIPS has returned from a trip to Washington Territory.

ALL the powers except the Porte have ratified the Treaty of Berlin.

UNION COLLEGE has given Edison the degree of Doctor of Philosophy.

THE Russians estimate their total war expenditure at 988,000,000 roubles.

HON. HORACE DAVIS and Milton S. Latbam have returned from the East.

PROPOSALS will be made in September to make Servia a kingdom.

At Santa Monica, the 21st of July, a shark weighing 125 pounds was caught.

Two poets, Tennyson and Tupper, have grown rich on the England of the present.

On the 27th of July a bark from Matanza arrived in Florida with yellow fever aboard.

THE Whitworth 38-ton gun, recently experimented upon at Woolwich, proves to be a failure.

At Lincoln, Placer county, Cal., 300 acres of wheat and stubble were burnt over on the 22d of July.

THE damage done in Tucson, A. T., by the recent flood is estimated at \$40,000 and upwards.

YELLOW fever continues at New Orleans. Total number of cases, 50; deaths, more than half that.

A BALE of cotton from Memphis was awarded the first premium at the Paris Exposition Saturday.

THREE Sundays in succession, ending with June 30th, London was visited by terrific thunderstorms.

On July 26th Gen. Garfield, while bathing in the surf at Atlantic city, N. J., was taken with vertigo.

EFFORTS are being made for the establishment of a line of steamers between Cuba and the ports of the Republic of Honduras.

EXPLORER STANLEY is said to have accepted a proposition, made by the King of Belgium, to defray the expenses of another trip across Africa.

GENERAL SHERIDAN expresses the opinion that a permanent military post will be located at some point between the Spearfish and Rapid Creek valleys.

FOR the first time since 1852 a formidable plague of grasshoppers threatens destruction and desolation to the crops of the husbandmen in Salvador.

THE first embassy that has ever been sent by the Republic of Mexico to the sister Republics of South America has passed through Panama on its way south.

SEÑOR CASSANUEVA, who vouched for the respectability and scientific attainments of M. Paraf, has been removed from his post of Consul-General of Chile in California.

On the 26th of July 22 tons of fine silver bars, valued at \$750,000, were shipped from the assay office in New York to the Philadelphia Mint for coinage into standard silver dollars.

REPORTS coming in from Northern Iowa and Southern Minnesota state that the crops are badly damaged in those sections. Wheat in some counties will not yield over seven bushels to the acre.

GRASSHOPPERS are desolating many districts of Honduras. Crops disappear before them in a day, and the sparsely populated localities are entirely at their mercy. The Government calls upon the people to unite in some systematic way to drive off the destroyers.

THE Argentine explorer, Don Frau. Moreno, claims to have discovered the Patagonian volcano, seen by the U. S. steamer *Omaha*, and named after that vessel, nine months previous to its discovery by that vessel. He saw it in eruption March 3d. It is the most southerly volcano yet discovered.

ISAAC HOWELL, SR., died at his residence in San Luis Obispo on the 4th of June, aged 80 years. Mr. Howell removed from New York State to California with his family in 1846. In 1848 he settled in Napa county, where he lived 23 years, having moved to San Luis Obispo with his wife about seven years ago.

On July 22d a cloudburst occurred about 40 miles north of Yankton, Dakota, by which a large portion of the country was submerged and seven persons drowned. The west branch of Vermillion river, ordinarily about two rods wide, was filled to a width of over a mile and a depth of from ten to three feet. Much destruction of property is reported.

LIEUTENANTS RUCKER and HENELEY of the Sixth cavalry, highly esteemed for their successful efforts to rid Arizona of Apaches, were drowned in White river, at Camp Supply, about the 12th. The storm had swollen the river. Lieut. Heneley in crossing was unhorsed and swept down the stream, receiving a death stroke from a stump or log. Rucker went to his rescue but was overcome by the boiling current.

On July 28th Ex-Governor George L. Curry, of Oregon, died, after a long and painful illness. The deceased came to Oregon in 1846, and soon after his arrival there assumed editorial charge of the *Oregon Spectator*, at Oregon City, the first newspaper published in the country. He was, about 1854, appointed Governor of the Territory by Pierce, and held that position until the organization of the State Government in 1859. His life has been active in both politics and private business; yet he leaves a spotless and honored name—a great thing now-a-days.

THE Sultan has ratified the treaty of Berlin. RUSSIAN and Roumanian troops are returning home.

In the whole territory of Montana there are 24,590 Indians and 2,094 soldiers.

COUNT ANDRASSY's only daughter is to marry Prince Alfred of Montenegro.

A COMMERCIAL treaty between France and America is under consideration.

NUBAR PASHA has been summoned from Paris by the Khedive to aid in reform in Egypt.

On July 30th a construction train with four flat cars was wrecked near Vallejo by a displaced rail. Nobody hurt.

A SHOCK of earthquake was experienced on July 26th at Los Angeles, San Bernardino, Riverside and other points in Southern California.

A FAMILY in New Orleans of four persons were poisoned by using oxalic acid for sugar in cooking. One died and the rest may probably recover.

SOME extensive placer mines about 240 miles up the river from Yuma lately discovered are worked by dry washing and yield from \$4 to \$20 per day to the man.

IN Minnesota on July 30th a hail storm did much damage to crops. Stones four inches in circumference fell, covering the ground to a depth of three inches.

FOURTEEN children and three teachers were drowned by the capsizing of a boat July 26th on the river Blackwater, near the town of Bailieborough, Ireland.

KING ALFONSO has not recovered from the deep melancholy with which he has been afflicted since the death of Queen Mercedes. It is feared he contemplates abdicating and retiring to a monastery for the remainder of his life.

THE Minister of Commerce has informed the Central Committee of the Exhibition that he has decided to reduce the value of the gold medals, so as to double their number. There will now be 150 grand prizes and 2,500 gold medals.

A CHILD was lost on the desert near Moore's station, on the railroad, about the 16th. It wandered about in the hot sun without food or water for four days, when it was tracked and found by its father. When found it was crazy, but soon recovered.

THE Southern Pacific railroad company have bored an artesian well near Tipton, Tulare county, with flattering success. The well is 310 feet deep and yields per day 86,000 gallons of water, containing but six grains of solid matter to the gallon.

On the 21st of July a young lady of Sonora picked up a giant powder cap with a hair-pin. The cap exploded. The thumb and forefinger of her left hand had to be amputated. The third finger is badly lacerated and a piece of the cap struck her forehead.

A RIOT took place in Yokohama in consequence of two Buddhist priests preaching that the sun moves and the earth stands still. They were ridiculed by students, who in turn were attacked by the mob. One student was mortally wounded. Japanese only were concerned in the affair.

THE steamer *City of Tokio* arrived in San Francisco nine days behind time, having been under sail 13 days during the trip—her crank-pin broken. She made the quickest time on record between Hongkong and Yokohama—4 days, 20 hours, 40 min. The Chinese Embassy came on the *Tokio*. It consists of 45 persons. Sit Ming Cook is the Chinese Consul for San Francisco. He is a very bright and intelligent young man. He has received a thorough English education at New Bedford, Mass.

His excellency, the Ambassador from China, is upwards of 60 years old, with scanty whiskers about the mouth and chin. His features are regular, his countenance intelligent and pleasing. In fact, all of the members of the suite are well-bred, polite, and have bright, intelligent faces. He is Lieutenant-Governor of the Imperial family, which, in a measure, is under his jurisdiction. He was Imperial Commissioner to the United States in 1875, and has also been a Commissioner to England and Spain. His own suite consists of 22 persons. His mission to this country is to establish the consulates and to transact some lesser diplomatic business. He will present his credentials at Washington, have the Consuls recognized, and then go to Spain and Peru to establish consulates there.

SUGGESTION ON WOOD SPECIMENS.—In a library in Warsenstein, near Cassel, in Germany, in the agricultural department, is a novel collection of books. At first glance they appear like rough blocks of wood, but upon closer examination it will be found that each one is a complete history of the particular tree which it represents. From the back of the book the bark has been removed from a space large enough to admit the scientific and common name of the tree. One side is formed from the split wood of the tree, showing its grain and natural fracture. The other shows the wood where worked smooth and varnished. One end shows the grain of the wood as left by the saw, and the other the finely polished wood. On opening the book one finds the fruit, seeds, leaves and other products of the tree; the moss which usually grows upon its trunk and the insects which feed upon various parts of the tree. To this is added a plainly printed description of the habits, usual location and manner of growth of the tree, all forming a complete history of each kind of timber represented, and in form readily understood by all.



A Summer Evening.

I.
The summer sun is setting,
The sky is red in the west,
And over all hangs silence,
And a feeling of peace and rest.

II.
The sultry day is over,
The light begins to fade,
The farmer's weary horses
Are standing in the shade.

III.
The golden light of sunset
Shines on the corn-fields round,
And the breeze, as it passes over,
Makes a sweet rippling sound.

IV.
The range of distant mountains
Looks dark against the sky,
And right across the river
A path of light doth lie.

V.
I gazed till my eyes were dazzled
At the slowly sinking sun;
Till the stars peeped out above,
Telling the day was done.

Song of the Laborer.

Brown and burly, honest and free,
Resting, he sits by the fire;
Wife at his side, and bairns at his knee,
What can he more desire?

And he sings them a song, not grand nor long,
But that song in their hearts shall stay,
And cheer them on, when he is gone,
To labor, and trust and pray.

"Low and mighty; master and man;
Labor and do your best!
Think you can do it, and do it you can,
God will take care of the rest!"

Late and early, early and late,
His heart in his honest hand;
This first thought as he gains his gait
God and his master's hand!

And in after days in life's scatter'd throng,
When his children are scattered wide,
Each, at his work, recalls the song
He sang that eventide:

"Low and mighty; master and man;
Labor and do your best!
Think you can do it, and do it you can,
God will take care of the rest!"

—F. E. Weatherly, in *The Quiver*.

Winning A Wife.

"You had better allow me to accompany you, Anne. The scouts report fresh 'sign' in the neighborhood. Some of the heathen may be outlying on the watch for scalps or captives."

"No, thank you. For a month we'll be prisoners in the borough; to-day we will breathe the air of freedom, though Simon Girty himself be lurking around. Come, Jessie," and laughing merrily at the borderer's shadowed countenance, the two maidens hastened away from the gate.

It was late in the summer of 1778. Less than one week before, Boonesborough had been surrounded by hundreds of bloodthirsty savages under Blackfish and Captain Du Quesne. Stubbornly resisted, the Shawanese lifted the siege and retreated. Yet what was more likely than that some savages might still be hovering near, hoping to partly avenge the death of their two score comrades whose life had ended before the fire-breathing rifles of the besieged.

Henry Smith watched the young women until the neighboring forest shut them from his view; then he turned away with a sigh. Had his love been less strong he might have followed them, and thus saved much toil and suffering. But Anne Medway was a bit of a coquette, and just now she frowned on the suit of the gallant Virginian. For nearly a year Smith had been paying her his court, and never did mischievous maiden more assiduously exert her power than Anne. In her hands Smith was a toy. Yet, in his native State, he had gained a name for daring courage and skill—rising to the post of major. But James Medway migrated to Kentucky, taking with him his family. And six months later Major Smith followed him, to renew his suit. He became a favorite with Daniel Boone, and during the great pioneer's frequent excursions, Smith was left in charge of the settlement.

Anne and Jessie strolled idly along the bank of the beautiful river, plucking flowers or casting sticks and bits of bark into the rapid current, acting like children just freed from school. The warning words of the young ranger were forgotten—the settlement was left far behind them.

"Look, Anne—a canoe!" suddenly cried Jessie Moss, pointing to where the stern of a bark canoe protruded from a clump of bushes.

"It belongs to one of the hunters, no doubt. Come, 'tis early yet. Hammond's cabin is nearly opposite. Suppose we surprise Lucy?"

"But the current is so swift," demurred Jessie.

"Nonsense! I've not forgotten how to paddle. Come, I'll be ferrywoman. Step in. Careful—that's it. Now—off we go!"

Laughing merrily, Anne pushed the frail craft from shore, and seized the paddle. But she had underestimated the force of the current. The bark danced restlessly, and Anne found it hard to manage. Twice the canoe whirled quite around, but as often resumed its course, for now, fairly alarmed, the maidens plied their paddles with all their strength and skill.

"Pull, Anne—pull!" gasped Jessie. "The snag!"

Just below them the waters were broken by a jagged sawyer, that half the time was quite hidden from view. The current was fast sweeping their boat upon this obstacle. For a moment it looked as though their efforts would succeed, but then a paddle broke, almost casting Anne overboard.

The canoe whirled around, dancing uneasily. Then the swift current dashed it upon the snag. The bark gave way like an eggshell, and with cries of terror, the girls were cast into the water.

For a moment they struggled desperately, their shrieks half-stifled by the roaring waters. Then Anne rose; the water scarce reached her waist. They were upon a sand bar that reached nearly a third of the way across the river. As this fact became plain, the terror of the girls changed to mirth; and there they stood, each laughing gleefully at the ludicrous figure made by the other in her wet, clinging garments. Jest-ing over their adventure, they struggled through the shallow water, all unconscious of the gloating gaze fastened upon them from the bush-fringed shore.

"If the Hammonds should not be at home we'd be in a pretty—"

A number of dusky, paint-bedaubed figures sprang through the bushes, and seized upon the girls. Their shrieks were quickly stifled. Choked into silence, half-fainting, they sank helpless into the arms of their captors, who immediately plugged into the forest.

It was near sunset that the prolonged absence of the maidens excited alarm at the settlement. Then, his heart heating wildly, Smith took up the trail and followed it until lost by the water. The canoe had left its trace—the truth was easy read. Ten minutes later the trail-hunters were searching the opposite shore; and then the terrible truth was known.

The moist sand still retained the imprints of the maidens' feet—but beside them were others, deeper, broader—the trace of moccasined feet. With a groan Smith sank to the ground. The blow seemed to paralyze all his energy. But not so with the other borderers. By the dying light they scanned the trail, reading it as one reads the page of a printed book.

The captors were five in number—probably some of the army that had recently besieged Boonesborough, lurking behind to pick off stragglers. The girls had been carried away in the arms of the savages, for their footprints were no longer to be found, nor any trace of blood to tell of violence.

That was a long, weary night to the bereaved ones, especially to Smith. Nothing could be done until daylight, while they knew that every moment was adding to the start gained by the abductors.

With the first glimmer of dawn the trail was taken up by Smith and three comrades. More could not be spared from the settlement. All that day they followed it without pause or rest. At night, when darkness put a stop to their labors, Smith lay down, but could not sleep. His heart was sore with thoughts of his loved one's sufferings. That these had been great, that day had told him. The savages had traveled at a rapid rate, forcing the captives to keep pace with them. Their shoes were cut and torn by the sharp rocks and roots. At times blood traces showed where they had passed. And yet Smith knew that they were keeping up hope—that they felt confident friends were working for their freedom. The trail was marked by occasional broken twigs, or bits of cloth that had eluded the eyes of the savages. Even in the midst of his misery, he felt a peculiar pride in the courage and coolness of the one he so dearly loved, who could so cunningly deceive the foe, while aiding the pursuer.

He was correct in his guess. Anne left the sign for their guidance. One of the savages, while goading her on with a pointed stick, promised to make amends for her sufferings by making her his squaw as soon as the village was gained. Instead of crushing her spirits, these threats aroused the maiden. She broke twigs as she passed along, delaying the party as much as possible by her lagging and blundering footsteps.

At dawn the borderers again started forward, but the past night had greatly composed Smith, and he was once more the cool, keen-witted scout. Through the forenoon he carefully noted the course pursued by the Shawanese. He began to fear that they would reach their village before being overtaken, and urged on by this dread he resolved upon a desperate course.

Should the same course be held, he knew the Indians must cross the next stream at a certain pass, it being the only ford for miles. By making direct for this point, without pausing to spell out the trail, much valuable time might be gained, and as a last hope the settlers resolved to attempt it.

The pass was reached, and to their great joy the trail was found. The rocks in the stream were still wet with the water splashed up by the passage. The savages could not be far distant now.

"Look! A smoke!" suddenly muttered Crafton.

"Wait here. I'll go forward and reconnoiter," whispered Smith.

Scarce 200 yards he crawled, then paused, peering out upon the camp of savages. They were eating. Anne and Jessie sat near them, their hands bound and their feet free. Suddenly one of the savages arose and strode to Anne's side, offering her some food. As she refused it he struck her. That was his last insult. The scout's rifle was raised and spoke, and the Indian, with a shrill death yell, fell to the ground shot through the brain.

The other Indians seized their weapons. Smith sprang forward. The maidens uttered cries of joy and rushed to meet their friends. The Indians leveled their rifles. Smith rushed upon them with clubbed rifle. His riflebutt crushed one Indian to the ground, dashing out his brains. Then—crack—crack—crack! three rifles spoke, and three Indians fell, dead and dying. The long trail was ended.

The little party reached Boonesborough in safety and Henry Smith was a truly happy man, for during the journey Anne forgot her coquetry and confessed that his love was returned. Before the first snow fell they were married.

Both are long since dead, but their descendants still tell the story of how the daring young anger won his wife.—*Joseph E. Badger, Jr.*

WOMEN'S INFLUENCE ON SOCIAL LIFE.—Men, as a rule, are easily attracted to a beautiful face, but still it is an internal beauty of character by which a woman can exert the greatest amount of influence. A true-minded man, though at first enamoured by the glare of personal beauty, will soon feel the hollowness of its charms when he discovers the lack of beauty in the mind. Inestimably great is the influence a sweet-minded woman may wield over those around her. It is to her that her friends would come in seasons of sorrow and sickness for help and support—one soothing touch of her kindly hand would work wonders on the feverish child, a few words let fall from her lips in the ear of a sorrowing sister would do much to raise the load of grief which was bowing its victim down to the dust in anguish. The husband comes home, worn out with the pressure of business and feeling irritable with the world in general; but when he enters the cosy sitting-room and sees the blaze of the bright fire, his slippers placed by loving hands in readiness, and meets his wife's smiling face, he succumbs in a moment to the soothing influences which act as the balm of Gilead on his wounded spirits, that are wearied with combating with the stern realities of life. The rough schoolboy flies in a rage from the taunts of his companions to find solace in his mother's smile; the little one, full of grief with its own large trouble, finds a haven of rest on its mother's breast, and so one might go on with instance after instance of the influence a sweet-minded woman has in the social life with which she is connected.—*St. James' Magazine.*

BOYS AND SMALL FRUITS.—Prof. Welsh, in the *Chicago Times*, makes the following excellent suggestions concerning the encouragement of boys: Boys on farms, like boys in other places, want spending money, and are often sorely troubled to obtain it. They scarcely like to ask their parents for money to buy articles that please their fancy, and have few opportunities to work out, for when neighboring farmers wish to hire help, there is plenty of work on the farm where they belong. Their best chance appears to be in cultivating some crop at home that requires small capital to engage in, a small amount of land for its production, but which produces a considerable amount of money. The small fruits are excellent in these respects. They may be set out at times when the soil is too wet to be worked to good advantage and may be cultivated at odd hours when there is little to do in the fields. They require but a small amount of land and produce more money from an acre than any farm crop. Small fruits can generally be disposed of to better advantage in country villages, or even among neighboring farmers, than in large cities, as there is no expense for packages, transportation or for selling. The country boy can take his own fruit to his customers, sell it by measure and pocket all the proceeds. As a rule, small fruits sell for more in the country than in the city, although they pass through several hands in the latter place.

OPPORTUNITIES OF RURAL LIFE.—Thus writes a farmer to the *Cultivator*: I once was a professional, a public servant, and I know that now that I am farmer I have ten hours for study and reflection, where I had one then. My own health is better, my family is healthier and happier, while our general enjoyment is enhanced a hundred-fold since we returned to the farm. I was proud of my profession, but I am much prouder of the brown, hard hands, the sun-browned cheek and the tough, hardy frame of the working farmer. I tell you, my hardworking brothers, we can, and ought, to make herculean efforts toward mental and moral improvements, both in the family circle, in the neighborhood, and in a more general way for the educational interests of the entire class to which we belong. Let us arise and burst the dark clouds that shut us in, speaking with pen, with voice and at the ballot-box, in tones that will, at least, command respect, in favor of all deserving educational systems.

What Is a "Team?"

The court of queen's bench were recently called upon to give a legal definition to the word "team." A tenant of an English duke had agreed, as a part of his rent payment, to furnish at sundry times "one day's team work with two horses and one proper person."

On one occasion the duke's manager desired the farmer to send a cart to fetch coals from a railway station to the ducal mansion. The farmer offered to furnish two horses and a man, but insisted that the duke should supply the cart. "There can't be a 'team' without a cart or wagon," said the manager. "Oh, yes, there can!" replied the farmer, "the horses are the team."

Both parties were honest, and both were obstinate, and so law was asked to decide which definition of a "team" was correct, the duke's or farmer's. A jury said the duke's, but the farmer asked the court of queen's bench if the jury were not quite as incorrect as was the duke.

The court heard learned lawyers argue, and also discussed among themselves, "What is a team?" Poetry and lexicons were appealed to. One judge quoted these lines to show that the team is separate from the cart:

"Giles felt was sleeping, in his cart he lay,
Some wagish pilferers stole his team away.
Giles wakes and cries, 'Ods bodkins, what is here?
Why, how now; am I tiles or not?
If he, I've lost six geldings to my snarl;
If not, Ods bodkins, I've found a cart.'"

Another judge quoted a line from Wordsworth:

"My jolly team will work alone for me."

Horses, said the learned judge, might be "jolly," but a cart cannot. Whereupon, the counsel for the duke gave the judge "a Rowland" for his "Oliver" by citing Gray's lines:

"Oft did the harvest to their sickle yield,
Their furrow oft the stubborn glebe hath broke;
How jocund did they drive their team afield,
How bow'd the wood beneath their sturdy stroke!"

But the farmer's lawyer "capped" that quotation with several citations from the poets. From Spenser:

"There a ploughman all unmeeting found,
As he his toilsome team that way did guide,
And brought thee up a plowman's state to bide."

From Shakespeare:

"We fairies that do run,
By the triple Hecate's team,
From the presence of the sun,
Following darkness like a dream."

From Dryden:

"Any number, and passing in a line,
Like a long team of snowy swans on high,
Which clap their wings and cleave the liquid sky."

The judges decided two to one that the farmer's definition of "team" was correct; and then, as if to add another to the many illustrations of the "glorious uncertainty of the law," said they would hear the case over again.

The case shows the importance of putting down in a written agreement just what is agreed upon, and of eschewing all ambiguous words.

CEMETERY CUSTOMS IN EUROPE.—The story goes that a Frenchman who had lost his wife ordered a stone-cutter to make him a suitable tombstone, and on it to cut the single word *regrets*. The stone-cutter respectfully hinted that *regrets eternels* would be a more appropriate inscription. "Alas! no, sir," said the gentleman. "I have hired the grave for five years only." The story may very probably be a true one, for it is a common practice in several European countries to hire graves for a term of years and renew the lease when the first one expires, if the friends of the dead have the money or the loving respect that would keep their remains undisturbed. But if there are no means of renewing the lease, or if the relatives are forgetful, or the family extinct, the remains are taken up and buried again in a common trench, or relegated to a catacomb, as the case may be. In some of the burial-grounds of Paris the condition of things is really frightful. Here the ground is used over and over again, till it has lost not only all its original antiseptic properties, but has become a distinct source of corruption. It is no uncommon thing for the grave diggers, whose unpleasant duty it is to exhume the bodies, which have been buried for a longer or shorter period, to be asphyxiated by the gases arising from the graves they are opening; and it has been more than once suggested, to the municipal council of the city, that these men be furnished with pure air while at their ghastly work, by the same kind of apparatus that serves for submarine divers.—*Architect.*

POETRY IN FARM LIFE.—The following stanza is from a letter to the *Rural New Yorker*: Then, there is the dear wife, who still continues to bear the burden and heat of the day, but whose life is now cheered by the help of her boys and girls, who begin to feel and know what mother has done for them. Her step may not be as light as it was 15 years ago, but the cheerfulness of the home which she has helped to build up and embellish sends a ruddy, satisfied glow over her cheeks, and warms the whole household with sunshine and gladness. Poetry! yes, I have heard it; and it is in thousands of farm homes in this land. Despite all the sin and evil in the world, in the majority of farm homes poetry, love, virtue, benevolence, hospitality and charity gladden and cheer all those who come in contact with them, and make gleesome poetry on the farm.

Curiosities of English.

The following are a few amusing examples of the "curiosities of English," as respects the change of sound produced by different consonants:

B makes the road broad, turns the ear to bear, and Tom into tomb.

C makes limb climb, hanged changed, a lever clever, and transports a lover to clover.

D turns a bear to beard, a crow to crowd, and makes anger danger.

F turns lower regions to flower regions.

G changes a son to a song and makes one gone.

H changes eight to height.

K makes now know and eyed keyed.

L transforms a pear into pearl.

N turns a line into linen, a crow to a crown, and makes one none.

P metamorphoses lumber into plumber.

S turns even into seven, makes have shave, and word a sword, a pear a spear, makes slaughter of laughter, and curiously changes "having a hoe" to "shaving a shoe."

T makes a hough bought, turns here there, alters one to tone, changes ether to tether, and transforms the phrase, "allow his own" to "allow this town."

W does well; *e. g.*, hose are whose, are becomes ware, on won, omen, women, so sow, vie view; it makes an arm warn, and turns a hat into—what?

Y turns fur to fury, a man to many, to to toy, rnb to ruby, ours to yours, a lad to a lady.

JOY BRINGERS.—Some men move through life as a band of music down the street, flinging out pleasures on every side through the air to every one, far and near, that can listen. Some men fill the air with their presence and sweetness, as orchards in October days fill the air with perfume of the ripe fruit. Some women cling to their own houses, like the honeysuckle over the doors, yet, like them, sweeten all the region with the subtle fragrances of righteousness which ever drop precious fruit around them. There are lives that shine like star-beams, or charm the heart like songs sung upon a holy day. How great a bounty and a blessing it is to hold the royal gifts of the soul, so that they shall be music to some and fragrance to others, and life to all! It would be no unworthy thing to live for, to make the power which we have within us the breath of other men's joy; to scatter sunshine where only clouds and shadows reign; to fill the atmosphere where earth's weary toilers must stand, with a brightness which they cannot create for themselves, and which they long for, enjoy and appreciate.

—Christian Advocate.

PROFESSIONAL MEN.—The pursuit of agriculture presents a far more certain field for earnest work, or for educated men, than either law or medicine. As illustrating this point, we are in receipt of useful statistics, showing the careers of 1,000 graduates of a great medical school in England, carefully watched through a long series of years, with the following result: Nine per cent. of the number achieved success of sufficient magnitude to be classed as prosperous; 30% gained a moderate competency, and 61% either failed, more or less completely, died, or went out of the profession. Both in this country and in England professional men often have to spend the best portion of their lives in waiting for opportunities. Lawyers and doctors seldom make enough to pay their living expenses before they are 30 to 40 years of age, and it is difficult to account for the strange infatuation which leads many young men to attempt to force their way into such overcrowded professions, which nature never intended them to fill. However, the general depression in business is gradually educating men to the necessity of honest toil for securing their daily bread.

—Cultivator.

EFFECTS OF PERFUME ON HEALTH.—An Italian professor has made some very agreeable medicinal researches, resulting in the discovery that vegetable perfumes exercise a positively healthful influence on the atmosphere, converting its oxygen into ozone, and thus increasing its oxidizing influence. The essences found to develop the largest quantity of ozone are those of cherry, laurel, clover, lavender, mint, juniper, lemon, fennel and bergamot; those that give it in smaller quantity are anise, nutmeg and thyme. The flowers of the narcissus, hyacinth, mignonette, heliotrope and lily of the valley develop ozone in closed vessels. Flowers destitute of perfume do not develop it, and those which have but slight perfume develop it in small quantities. Reasoning from these facts the professor recommends the cultivation of flowers in marshy districts, and in all places infested with animal emanations, on account of powerful oxidizing influence of ozone.

MISSIONARY WORK AT HOME.—In "Roxy" Dr. Eggleston sets forth a common error with many men and women, too—more common, perhaps, with women than with men. "Roxy" would have gladly borne privation and hardship in the missionary field, she sought to save souls in revivals, she tended with soft hands the sick, but she could not see, until perhaps too late, that her real mission in life was to win and save her husband; that there was an object toward which she might send forth all the force of her nature. While her heart was yearning over the perishing heathen, her husband was going straight to ruin right under her eyes.

YOUNG FOLKS' COLUMN.

The Blacksmith's Hammer.

[Written for the RURAL PRESS by WINNIE WINTER.]

The blacksmith's hammer is busy all day,
Bing tang, bing tang, bing tang bang;
A-heating and bending the iron they say:
Ting tang, ting tang, ting ting tang.

From early at noon till late in the night,
I hear its incessant clang;
A-pounding the anvil with all its might,
Ding dong, ding dong, ding dong dang.

I like to hear its lively, cheerful song;
Its noisy, tinkering sound;
As up and down it goes all the day long,
Making sweet music around.

Little boys and girls, be useful you may;
Always your parents obey;
Work hard when you work, play hard when you play,
And keep the bad thoughts away.

Fountain Dell, July 15th, 1878.

A Dog Supplying Cake to a Lost Child.

One of the most striking instances which we have heard, say the Messrs. Chambers in their "Anecdotes of Dogs," of sagacity and personal attachment in the shepherd's dog occurred about half a century ago among the Grampian mountains. In one of his excursions to his distant flocks, a shepherd took with him one of his children. After traversing the hills for some time, attended by his dog, the shepherd found himself under the necessity of ascending a summit some distance to have a more extensive view of his range. As the ascent was too fatiguing for the child, he left him on a small plain at the bottom, with the strict injunction not to stir from it till his return.

Scarcely, however, had he gained the summit when the horizon was suddenly darkened by one of those impenetrable mists which frequently descend so rapidly amid these mountains as in the space of a few minutes, almost to turn day into night. The anxious father instantly hastened back to find his child; but, owing to the unusual darkness and his own trepidation, he unfortunately missed his way in the descent. After a fruitless search of many hours among the dangerous morasses and cataraacts with which these mountains abound, he was at length overtaken by night.

Still wandering on without knowing whither, he at length came to the verge of mist, and by the light of the moon, discovered that he had reached the bottom of the valley, and was within a short distance of his cottage. To renew the search that night was equally fruitless and dangerous. He was therefore obliged to return to his cottage, having lost both his child and his dog, which had attended him faithfully for years.

Next morning by daybreak the shepherd, accompanied by a band of his neighbors, set out in search of his child; but, after a day spent in fruitless fatigue, he was at last compelled by the approach of night to descend from the mountain. On returning to his cottage, he found that the dog, which he had lost the day before, had been home, and, on receiving a piece of cake, had instantly started off again.

For several successive days the shepherd renewed the search for his child, and still, on returning at evening disappointed to his cottage, he found that the dog had been home, and, on receiving his usual allowance of cake, had instantly disappeared. Struck with this singular circumstance, he remained at home one day, and when the dog as usual departed with his piece of cake, he resolved to follow him, and find out the cause of his strange procedure.

The dog led the way to a cataract at some distance from the spot where the shepherd had left his child. The hanks of the cataract almost joined at the top, yet separated by an abyss of immense depth, presented that appearance which so often astonishes and appalls the travelers who frequent the Grampian mountains, and indicates that these stupendous chasms were not the silent work of time, but the sudden effect of some violent convulsion of the earth.

Down one of these rugged and almost perpendicular descents the dog began without hesitation to make his way, and at last disappeared into a cave, the mouth of which was almost upon a level with the torrent. The shepherd with difficulty followed, but on entering the cave, what were his emotions when he beheld his child eating with much satisfaction the cake which the dog had just brought him, while the faithful animal stood by eyeing his young charge with the utmost complacency.

From the situation in which the child was found, it appears that he had wandered to the brink of the precipice, and then either fallen or scrambled down till he reached the cave, which the dread of the torrent had afterward prevented him from quitting. The dog, by means of his scent, had traced him to the spot, and afterward prevented him from starving by giving up to him his own daily allowance. He appeared never to have quitted the child by night or day, except when it was necessary to go for his food, then he was always seen running at full speed to and from the cottage.

LAURA BRIDGMAN, whom Charles Dickens manifested so much interest in on the occasion of his first visit to America, and whose interesting history he records in his "American Notes," is still living in one of the New England States.

GOOD HEALTH.

Artificial Light and the Eyes.

The *Medical Examiner* discusses the question of what is the best source of artificial light as affecting the eyesight. Very little knowledge of an absolute description is available on this branch of the subject, but it may be laid down as a general rule that flickering lights, and those of great intensity, are the most trying to the eyes. The Argand form of burner affords the steadiest and best light, and perhaps the arrangement which is least trying to the eyes is to be obtained by the interposition of a shade so placed as screen all direct light-rays from the eyes, at the same time that sufficient illumination is obtained as the place required for work. A medium should also be chosen between too little light, on the one hand, and too much light on the other; for, in the first case, the eyes become strained in endeavoring to obtain correct vision, and, in the second place, they become dazzled by the excessive glare. The color of the object to which the eyes are directed is also a consideration. In the pursuit of literary work, for instance, a tinted paper will be found less fatiguing to the vision than if the paper is of a pure white color. Dr. Croft has recently called attention to the question of color as affecting weak or deficient eyesight. He is of opinion that in some cases spectacles fitted with yellow glass afford more relief to the patient than the ordinary provided with blue glass. Much remains to be done in the study of the physiological action of various colored lights, and there effects on health and disease, and a careful investigation would, no doubt, be attended with results which would certainly be of the greatest interest, if not of the greatest practical value.

THE PHILOSOPHY OF WET FEET.—The *Herald of Health* says that if the feet were habituated to being washed every night in cold water and rubbed thoroughly, and if they were housed in airy boots, which did not cramp them, we should have less of the injury coming from wet feet. Still it is better to keep them dry, and to toughen them by bathing and friction. Otherwise the most serious injury will sometimes result. Laboring men get their feet wet more frequently than any other class, and no doubt while many of them have often done so without harm, yet others are able to point out frequent instances of harm which has come from it, especially when tired, or when very hot and the water cold. The injury comes from closing the pores of the skin, from contracting the vessels and preventing a free circulation, and from abstracting too much heat. Perhaps also the reflex action on the nervous system, and through it on the lungs and other organs, is one of the causes of injury. Our advice, then, is to keep the feet warm and dry, but not to cramp them, and not to make them tender by neglect of bathing or other means.

ADULTERATION OF COD LIVER OIL.—Mr. Khrohn, of Norway, an authority on cod liver oil, says, in an article contributed to the *Pharmaceutische Handelsblatt*, that in Norwegian oils of the first grade there is a liability to substitution of the oil obtained from the so-called hoakjarring, *Seymus borealis*, a fish sometimes attaining the length of twelve or fifteen feet. As much as two hundred or three hundred pounds are obtained from the liver of a single specimen, and consequently there is a great deal placed upon the market. The oil is bright and free from stearine, and somewhat cheaper than cod liver oil. It is, however, very difficult of digestion, and possesses a peculiar and disagreeable odor. Its low price and good appearance sometimes attract purchasers, who, in turn, pass off the oil for the genuine article.

WATER GAS FOR HEATING PURPOSES.—The *Journal of Gas Lighting* says: An old idea, it seems, has been revived, and it is again proposed to distribute water gas for heating purposes. There can be no doubt that, if a really practicable method for its production on a large scale could be devised, some economy might result from its use; but it would be at great risks. Everybody knows that carbonic oxide, which constitutes a large portion of the gas, is a deadly poison. It is, moreover, odorless, and consequently an escape would not be noticed. There is, therefore, the double risk of asphyxia from its presence, and of explosion in consequence of the mixture of hydrogen.

INJURY FROM ALUM IN BREAD.—The almost general use of alum by English bakers is one of the most fertile sources of dyspepsia, liver and bowel complaints in adults, and of debility and rickets in children. Bad teeth, and their early decay, is another consequence of the daily use of alum in the food. The bone matter (phosphate of lime) of bread, instead of being assimilated by the system, is either wholly or in part converted into a salt of alumina, which is useless and incapable of appropriation.—*Coolley's Cyclopaedia*.

DOMESTIC ECONOMY.

Cooking Poultry.

When properly cooked, few articles of food are more desirable than "broilers," or young chickens; but, unfortunately, they are seldom prepared in such style as to develop their best qualities or yield half the gratification they might. Like most kinds of meat, they are cooked so injudiciously that the juices are lost and the flesh becomes hard and stringy. This is too much the case with fried or baked chickens, as well as with the young "broilers."

For broiling, split a chicken down the back; clean and wash thoroughly; twist the tip of the wing over the second joint; wipe the body dry, inside and out, with a clean meat cloth (never with a wiping towel); spread it out, and with a rolling-pin or potato-masher, break the projecting breast bone, so that the chicken may lie flat on the gridiron when ready to broil. Set it in the ice chest for several hours after cleaning; still better if it is left there all night, and thus he sure it is well aired.

About an hour before time to cook the chicken put the giblets into a small skillet with a little pepper; pour in a cup and a half of boiling water and set it where they will boil gently till quite tender. Then salt them; take up and chop very fine, sifting over a little flour. When sufficiently fine, return them to the water in which they were boiled, stirring occasionally as it thickens. Beat to a smooth paste three tablespoonfuls of butter and one of flour, ready for use when the chicken is cooked. Put the gridiron over a clear but not fierce fire. When hot rub the bars with a clean cloth dipped in nicely clarified drippings or butter, and place the chicken over. Sprinkle on a little black pepper. Turn often to prevent scorching. When of a delicate brown both sides, but not more than half cooked, sprinkle on both sides what salt is needed and a little more pepper. Leave it over the fire a moment for the seasoning to penetrate, then put it into a steamer or farina kettle (a steamer is much the best) large enough at the bottom to keep the chicken in good shape. Spread over it the butter and flour that has been made ready, and then cover or "smother" it in rich cream, if plenty, or add more butter and cover with milk. Cover very close, if a farina kettle is used, so no steam may escape, and set it into the receiver or lower kettle, in which there should be enough boiling water just to touch the bottom of the upper kettle. Let it simmer or "smother" in the cream and seasoning from 15 to 25 minutes, according to the size of the chicken.

When about ready to take up, pour the gravy in which the giblets are simmering over it; then take the upper kettle out of the receiver; set it over the stove; let it boil up briskly two or three minutes, stirring the liquid gently, without disturbing the chicken, till it all thickens; then lift it carefully to a platter on which are slices of nicely toasted bread, and pour the gravy about it.

These directions are long on account of the minute specifications, but the whole work can be done in 35 minutes; and if on a faithful trial this is not conceded to be vastly superior to the common specimens of dried up, tough broiled chicken we shall be disappointed. For those who like highly seasoned food a very small sprinkling of savory herbs or a little tomato ketchup may be thought an improvement.

Fried chicken should be prepared in a similar manner. Fry carefully in hot butter or lard till delicately brown on both sides, then treat as broiled chicken.

Until chickens are full fleshed and suitable for baking this double cooking is the only way we are acquainted with to secure a wholesome and palatable article.

When old and tough baking chickens may be prepared in a similar way, only reversing the order; "smothering" first, an hour, if very tough, in water instead of cream, and bake till well browned.

Pigeons, quails, partridges, etc., are delicious if half baked, then "smothered" till very tender; and all such dry meats as these birds are greatly improved by being larded all over the breasts with nice salt pork before baking.—*Mrs. Henry Ward Beecher, in Christian Union.*

CEMENT FOR KEROSENE LAMPES.—The cement commonly used is nothing but plaster of Paris. But this is porous and quickly penetrated by the kerosene. Another cement, says the *Polytechnic*, is highly recommended, which has not this defect. It is made with three parts of resin, one of caustic soda and five of water. This composition is mixed with half its weight of plaster of Paris. It sets firmly in about three-quarters of an hour. It is said to be of great adhesive power, not permeable to kerosene, a low conductor of heat and but superficially attacked by hot water. Zinc white, white lead or precipitated chalk may be substituted for the plaster, but they harden more slowly.

GINGER BISCUIT.—Work well one and a quarter pounds of butter, with the same weight of moist sugar; add eight eggs well beaten; stir in two and a half pounds of flour, one ounce of volatile salts; one quarter of an ounce of ground ginger; mix these well, roll out the paste, cut in fancy shapes, and bake crisp.



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Saturday, August 3, 1878.

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The Week.

A recent trip through the harvest fields of the upper San Joaquin has given us ocular assurance of a good crop of grain for that portion of the State. Harvesting and threshing machines were everywhere in full action, and huge stacks of grain in the head were here and there awaiting in their turn for the coming of the tardy threshers.

This week's PRESS will be found to contain its usual amount of matter to interest and instruct its readers. Among the more important matters of local interest will be noticed a brief reference to a large sale of agricultural land in the San Joaquin Valley, whereby some already large landholders have greatly increased the extent of their domain. The coming fairs are already attracting much attention, notably so the Mechanics' Exhibition in this city, and the Golden Gate Agricultural Fair, which opens at Oakland on Monday, September 9th, and continues throughout the week. Among the drawbacks growing out of the heavy rains of last winter, and the variations of temperature during the summer, is a complaint, in some portions of the State, that the alfalfa meadows are making a slow and unsatisfactory growth. Alfalfa is a native of a dry and hot climate, and will undoubtedly be found to thrive best in our warmest and driest seasons. But, on the whole, our farmers are happy and rejoicing in the abundance of their harvests.

The Eclipse and Its Lessons.

The uppermost topic in scientific circles and in unscientific corners during the week has been the solar eclipse. Reports are already received by telegraph that the scores of scientific observers perched upon mountain tops along the path of total obscuration saw through their telescopes sights they never saw before and one at least reports the discovery of a small bright star or planet which had not yet been recorded upon sidereal charts. Time must elapse and observations must be compared before we shall really know whether the vexed question of admitting another planet to our sun-struck sisterhood of worlds is indeed solved. Be this as it may: the possible discovery of a new bright body which has thus far been hid in the glare of the blinding sun will afford pretext enough for a brief editorial preaching.

It is common to say that lessons are enforced in the darkness of adversity which go unheeded or unthought of in the sunlight of prosperity. This is often true. Individual consciences are quickened by bereavement and the result is a movement toward the higher life. Individual perceptions of the truth in ordinary living are also awakened, and the pinch of straightened circumstances sometimes teaches economy and frugality. But while these salutary influences are at work among individuals, and thus must in a degree work effects of national breadth, it is also a fact that in the time of eclipses in general prosperity there arise some of the most ruinous ideas and win adherents among discontented minds which would not have cherished them in prosperous days. Here is an apparent anomaly: a single condition working both good and evil. It is not uncommon in the affairs of men. It is not without analogy in the firmament above. The eclipse, shutting out the great luminary, brings naught but depth of darkness to some visions, while to others it reveals lights unseen before.

In life, as in astronomical observations, the results depend upon our fitness to observe and to understand what we see. Let us call that little star which the eclipse brought to view "Truth," and the bearings of the phenomenon upon the affairs of life will appear. In its individual and national life for the last few years the world has been undergoing an eclipse. Depression has been felt everywhere, but in varying degrees, just as in the solar eclipse there are degrees of observation in all directions from the path of totality. Perhaps the densest shadow has been cast upon this favored land and California has caught a partial shading. The question is what has been learned from the experience. Who has caught sight of the little star, "Truth?" Who has seized upon darkness and is propagating it?

A few years ago we were basking in the sunlight of apparent prosperity in this country. Money was plenty and expenditure was lavish. Men learned to play with millions as with marbles. We are taught to call for light to expose evil, and yet in the full glare of this prosperity men's eyes were dazzled and the most magnificent structures of fraud, corruption and injustice were reared. In individual interests there was evil ingenuity to secure and sinful extravagance to expend. The eclipse came on apace. Wise men discerned the feeble light of truth and have labored to retrench and reform their own fortunes and the nation's. Evil was laid low and injustice warned of its downfall by the vigorous, determined and yet lawful measures of reform which have been set in motion and will be farther pressed onward. While this has been the work of the wise, there has been seen the ill-directed and dangerous action of the unwise. In individual cases they have aimed to restore their prosperity not by the sure method of labor and economy, but have lingered in the arena of chance, either vainly endeavoring to recover by a "turn of luck," or by gilded schemes, to entrap the discontented and unwary. In wider efforts they have sought, by the propagation of base fallacies, to enlist men into adherence to doctrines which are false and can lead only to the outer darkness.

We should all have a care, when the brilliancy and hue of the lights are changed, that we do not see falsely and embrace a delusion. If we do this the suffering of adversity will only be exchanged for the vexation of defeat, the desperation of despair. Rather let those who have caught new rays of light amid the passing gloom prove that the light is of truth, and then pursue it in their daily life of manhood and business and in their lives as citizens of our common country. Let them see to it that they are not deceived by false ideas of the rights of property and the true method to acquire them; let them not persuade themselves that specious frauds instead of honest thought and honest substance are the tools by which true success is carved out.

If we do not all profit by the lessons of the industrial eclipse which is now clearing away, we shall have only ourselves to blame. The lessons are so plain that one who runs may read them. Let each one see, that, as he emerges from the shadow, his mind is charged with truer ideas and better policies. Thus will the obscurity only be remembered by the increased light which follows it.

The Proposed Lectures at the College of Agriculture.

The Professor of Agriculture at the State University informs us that he has received but one application for admission to the free courses of lectures on agricultural topics which have been proposed for the coming winter at Berkeley. It can hardly be that there is but one man in the State who desires to have his thoughts and spirit of investigation set in motion in agricultural science. As we pointed out at length a few weeks ago these lectures could be made of great practical value to all agricultural thinkers and workers who can arrange to attend them. We doubt not there will be defined, in each specialty which is taken up, the latest achievements in the application of scientific truth to practical agriculture. Thus there will be a fine opportunity to get possession of new facts or to discern new bearings for old facts. Doubtless the reason there has been but one application for the course is owing to delay in deeds which should have been done at once upon the giving of the invitation. Thus it was in our case, and we shall enrol ourself at once and expect to be both instructed and entertained by the discussions of industrial science. We think there are hundreds of young men in the State who will do well to follow our example, and thus enable Prof. Hilgard to proceed with his preparations.

In the course of the circular which we published in full in our issue of June 29th, the wish is expressed to give "a full course of instructions in the details of the several cultures constituting the various branches of husbandry: such as dairying, stock breeding, horticulture, fruit culture and the manufactures connected therewith, the growing of grain, forage, textile and other field crops, general farm management, etc. It is therefore intended to engage as lecturers in the several specialties competent persons, residents of this coast, thoroughly familiar with the peculiar circumstances, practice and needs of California agriculture. More detailed announcements cannot of course be made until a sufficient manifestation of interest shall have rendered probable the attendance of such number of students as will justify the expenditure, and definite arrangements with lecturers. Applications for admission should therefore be made as early as possible, so that the opening of the course may not be delayed too far beyond that of the session, which begins August 8th. Students may if desired attend only a part of the lectures to be given, and may also attend such other lectures and exercises in the University as they may be qualified to pursue profitably, and without interfering with the progress of the regular classes. In this, as in other respects, they will be subject to the general rules governing the attendance of special students, or of students at large, as the case may be." Communications on the subject should be addressed to E. W. Hilgard, Professor of Agriculture, Berkeley, Cal.

BUHACH.—We received a call the other day from Mr. G. N. Milco, of Stockton, whom we have formerly introduced to our readers as the originator of the culture of the "Persian Insect Powder" plant (*Pyrethrum carneum*) on this coast. In his effort to place this plant of his native Dalmatia upon a profitable basis of growth and manufacture Mr. Milco has expended several thousand dollars, and we hope and believe he is now on the eve of realizing handsomely from his investment of money and labor. The introduction of a new growth and manufacture is always attended with expense at first, but if the article be worthy the profit is sure to follow. We have tested the substance practically in the treatment of insects and have observed under the microscope its potent effects upon minute animal life. We have tested it side by side with the imported powder, and find it quicker in its effects, owing doubtless to its greater purity, and freshness. We believe Prof. Hilgard has it in mind to test its qualities thoroughly, and his verdict may be looked for to decide whether we may not indeed profitably extend the local culture of this plant as an insecticide. Mr. Milco believes that by cheapening production by the use of horsepower in cultivation and machines in gathering, etc., we may gain the powder at so little cost that it may be used profitably to fight certain field, orchard and garden pests. We hope it may thus be proved.

INTERESTING ARCHEOLOGICAL DISCOVERIES.—According to a Washington correspondent, Professor Baird, of the Smithsonian Institution, is preparing to send, within a few days, one of the scientific specialists in his employ into Virginia, to prosecute the archaeological investigations begun under the auspices of the Institution. The region of the investigation lies in Amelia county, about 50 miles south of Richmond, where there have been discovered quarries of soap-stone, or steatite, which appear to have been worked by the aboriginal inhabitants of the continent. Extensive traces have been found of these ancient quarries, out of which were procured the pots and various domestic vessels used by the aborigines of this region. A great number of specimen articles have been obtained already and brought to Washington. The examinations which have thus far been made prove that the quarries were abandoned at least 400 years ago, there being found in them no vestige of iron or other metal implements.

QUERIES AND REPLIES.

Apricots for Name.

EDITORS PRESS:—I will send you by express a small box of apricots. If it is not troubling you too much, I would like the correct name. They are cultivated here under three names. They are the best variety that is cultivated here, and if it is possible to get the correct name please do so.—JOSEPH SEXTON, Goleta, Santa Barbara Co.

We are unable to answer this question beyond the chance for controversy, because the diagnosis of the best fruit doctors which we consulted is divided against itself. Three fruit merchants in the city, who receive the greatest amount of apricots, put three names upon the specimens at once, and we were no better off than was our correspondent, for the fruit had three names before it left home. We then enlarged the circle of our inquiry. We consulted Messrs. R. S. Fox, of San Jose, James Shinn & Co., of Niles, and Emerson Crane, of San Lorenzo. On this trial the jury disagreed, but left some sign of concord, for Messrs. Fox and Crane pronounced the samples the "Peach" apricot. Messrs. Shinn & Co. called the fruit "Shipley's" or "Blenheim."

Mr. Fox, in giving his opinion, makes the following interesting points: "Apricots are a fruit that have few characteristic points—that is, the four varieties mostly cultivated, Peach, Royal, Hems Kirk, and Moorpark. My impression is, the samples are Peach apricot. The varieties ripen in the order named, 10 or 12 days only in the difference of ripening. Moorpark is the easiest distinguished. If you get them fresh from the tree, one-half is dead-ripe; the others not. The other sorts ripen evenly. So if Mr. Sexton has the sorts named he will easily distinguish by the time of ripening. I forward medium-sized specimens of the four varieties named. The trees have been picked over, and I venture to say, if the labels were gone, you would very likely say they were all the same kind."

Messrs. Shinn & Co. fix upon the "Shipley" because of a similarity between the fruit and descriptions of the "Shipley" in "time of ripening, size, color, flavor, and bitter kernel." According to Downing, the bitter kernel is also a mark of the Peach apricot. A distinction between the "Peach" and "Shipley" would be in the stone. The "Peach" has a perversive passage like the Moorpark; the "Shipley" has not. Unfortunately we have no pits to test this point.

Veterinary Points.

EDITORS PRESS:—I have a valuable mule, six years old. Two years ago I noticed he rubbed his foreleg from knee down very much, until the hair was all off. Has grown worse every summer; this season he has bitten it until it is constantly bleeding, and little lumps form all over his neck and fore shoulders, which he rubs and bites at constantly. Will you please state through the PRESS what this disease is, with cure for the same? I also have an animal which was threatened with "poll evil" on both sides two years ago, but by an application with a feather to the parts swollen it was checked temporarily. The following season it increased on both sides again, when I applied the same fluid, obtained from a veterinary surgeon, until it disappeared from one side while the other remains in part. As my application is all gone, and my surgeon has gone, I apply to the ever-present RURAL PRESS for a recipe which will reduce or scatter this swelling, which will confer a lasting favor on many readers in this section.—THOMAS F. CROFT, Los Angeles, Cal.

Both of these cases require the attention of a competent veterinarian. The mule has some symptoms of farcy and will require close watching to see that it does not degenerate into that disease. Careful feeding with bran mashes, containing sulphur and black antimony; a teaspoonful of sulphur, and as much antimony as will lie on a dime in each mash may be of service. Should the mule be in good health otherwise, it may be only the result of some local poison.

"Poll evils" are rarely permanently cured without a surgical operation, and the application of an outside wash of little benefit. You might try spirits of turpentine, sweet oil and spirits of camphor in equal proportions, rubbed into the hair night and morning.

Bounty for Squirrel Killing.

EDITORS PRESS:—I would like to know if there is any place in the State where they are paying bounty for squirrel killing and what part of the country is most infested with them?—J. N. WHITE, Dunigan, Yolo county, Cal.

We believe there is a bounty in several counties, but we are not sure which ones. The matter is fixed by the Supervisors of the counties and by some special acts of the Legislature. We have no material for answering the question fully. If our readers in counties where there is a bounty offered will inform us of its amount by postal card we will be obliged to them.

Where there are most squirrels it would require an accurate rodent census to determine. Generally it may be said of most parts of the State, as it was to those who might seek a monument, "if you seek squirrels look around you!" If our readers send us the counties in which bounties are in force, there will be some evidence of the existence of squirrels.

Flax Growing.

EDITORS PRESS:—In the last PRESS you wanted to know how many acres of flax there was in each place. We have in Pescadero 1,500 acres, which is looking fine. We are raising it for the seed. We have no means of using the straw.—ALEX. MOORE, Pescadero, Cal.

This note was received some time ago in answer to our request for information of the amount of flax grown in this State. We have waited for reports from other parts, but none have come. The agitation of the investment of capital in linen manufacture seems to have died away. We have heard nothing of it lately.

The Distribution of Water in the United States.

Although we are in the midst of summer's drouth and have neither fear of rain nor desire for it, it may not be improper to present a few general remarks on a moist subject. We give on this page a map of the United States, drawn to represent different conditions of rainfall in the different parts of the Union. It will be seen that there are all quantities from almost nothing up to perpetual drenching, and that in the same latitude there are most wide differences in the rain supply. It has always been a stumbling block in the way of the encyclopedia writers to describe the climate of the United States, and naturally so, for, as says a writer in Johnson's, to speak of the climate of the United States would be misleading. Nothing can be said of the United States, as a whole, in respect to temperature, humidity or force of the winds. The United States, owing to its vast extent in latitude and to the influence of great longitudinal chains of mountains, has many climates. The annual rainfall ranges from 72, 80 and even 100 inches upon the upper Pacific slopes, to 12, 8 and even 4 inches only on the great interior basin, between the Rocky mountains and the Sierra Nevada. The annual precipitation of rain and melted snow is greatest on the Pacific slope of

throughout the summer with a large amount of vapors. These fall in copious showers on all the eastern portion of the United States, increase considerably the total amount of rain and entirely obliterate the dryness of the summer, which usually characterizes the climate of these latitudes. If the regime of winter rains extends farther than usual in California, it may be traced to the influence of the great heat generated by the south western plateaus, which retards the condensation of the vapors from the Pacific until the winds have reached a higher latitude, and to the absence of polar winds, which are turned away by the Rocky mountains. Of the special influence exerted by mountain ranges on this coast, it may be said that the high border chains from Oregon to the Alaska Peninsula, which bend like a gigantic arm, catching the return trade winds of the Pacific, receive an amount of rain greater than any part of the continent, while the east side of these mountains has but a stinted share of the precious element. It is a remarkable fact, noted by Guyot, that the Appalachian system does not increase the condensation of rain, as mountains usually do. This is doubtless due to their extending parallel with and not transversely to the winds bearing rains.

We have thought that a map like the one on this page, showing approximately the amount of rain in different parts of our country, would be of value to our readers in any comparisons which they may desire to make. Therefore, we

The Golden Gate Fair.

Much interest is manifested throughout the bay counties in the arrangements for the first annual fair of the Golden Gate District Association. This fair will be held in Oakland, and is consequently accessible to many committees of exhibitors and visitors. The managers, according to descriptive articles in the *Times*, are pushing preparations. The exhibition of live stock and competitions for speed premiums are to be held on the grounds of the Oakland Trotting Park, which will be considerably extended and improved for the occasion. Not only will the accommodations for visitors be increased and rendered more comfortable, but the means of access, both by rail and carriage, will be rendered as nearly perfect as possible. In addition to all this, increased stabling is already in the process of erection, and extensive ranges of pens for cattle, sheep, swine, poultry, etc., are under contract and will be in readiness in ample season.

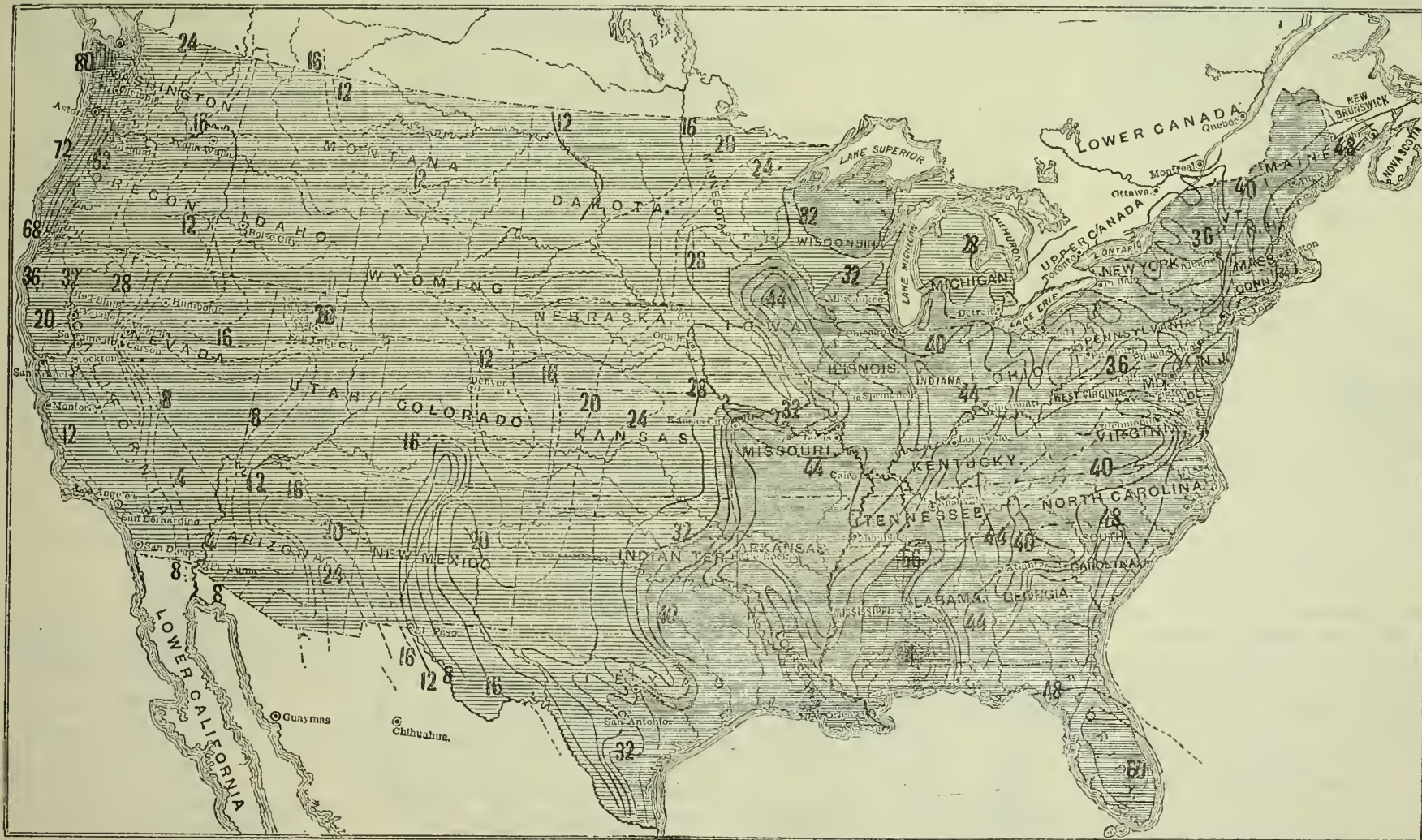
In addition to the live stock exhibition, the Directors are preparing for a general competitive display of the varied productions and manufactures of this coast, for which premiums on a similarly liberal scale are offered. To accommodate this part of the fair, plans and specifications have already been prepared by competent architects for a spacious pavilion, to be erected

and safe arrangements have been made for shipping and unshipping stock. Articles designed for the Pavilion should be shipped to Market Street station, Oakland.

The fair will open September 9th and continue during the week.

Government Surveying on this Coast.

Among the overland passengers we notice the names of Lieut. Wheeler's engineering corps, who are now arriving to begin a system of accurate surveys of different portions of Pacific coast territory. From exchanges we learn that the main stations to be occupied astronomically are Fort Seldon, N. M.; Fort Bliss, Texas; Tulare, California, on the Southern Pacific railroad; the Dalles, on the Columbia river, and Walla Walla, in Washington. Party No. 2, of the Utah section, instead of continuing its labors from Fort Hall to the north and westward as was at first intended, has been transferred to California, along the Sierras to the Coast Range southward from Bakersfield, and from Los Angeles toward San Diego. Party No. 3, of this section will continue the triangulation from an astronomical station at or near Visalia, through the Sierras, to join the triangulation brought from the base of Virginia City, and that developed in 1875, from the



MAP OF THE UNITED STATES, SHOWING THE AVERAGE RAINFALL IN INCHES AT DIFFERENT POINTS.

the Sierra Nevada and on the Coast range above the 42d degree. Below this the annual precipitation is reduced to a low average and occasional drouths result. Speaking generally the entire Atlantic slope is well watered, the average rainfall ranging from 32 to 56, and more, inches. Of the Mississippi valley, the eastern side receives an abundance of rain, though the southern portion, especially in Mississippi, is the most liberally watered. From the Mississippi westward the rainfall runs down from an average of 44, 40 or 36 to an average of 20, 16 or 12 along the 100th degree of longitude.

The differences in amounts of precipitation, aside from the general laws of rainfall, are obviously occasioned by local conformations of the surface and their relation to moisture-bearing winds. These affect not only the times of rainfall, but also its aggregate amount. Thus while southern California has but an average of about 10 inches, the lower States of the Mississippi valley, under the same latitude, has no less than 50 or 60 inches. San Francisco has an average of 23 inches, while Atlantic States in the same parallel have 42 inches.

Of the special causes producing a different condition of rain fall on this coast and in the Mississippi valley, Prof. Arnold Guyot remarks as follows: "The amount of rain on the Pacific coast increases northward and the regime of winter rains goes far beyond its natural limits to the 40th degree of latitude; while in the east the amount of rain decreases toward the north according to the general law. This remarkable anomaly in the rains of the Southern States is explained by that vast indentation forming the Gulf of Mexico, which, like a great boiler, supplies the return trade winds that prevail

have drawn and engraved the one which appears on this page, compiling it from the official drawings of the Smithsonian Institute. It will be noticed that the map is shaded somewhat, according to the weight of the rainfall, and that the figures give the average annual amount in inches within each area enclosed by the dotted lines. Of course it does not follow that amount of rainfall is alone the test of the productive power of a region. "Enough is as good as a feast," and our California average in some parts of the State is far preferable to the excess and unreasonableness which embraces agricultural operations in some other parts of the Union.

EXPENSIVE RIDDANCE OF POTATO-BUGS.—The potato-bugs near Lake Saratoga, New York, were blown away from the farmers, much to the satisfaction of these gentlemen, and drowned by millions, in the lake. So far, so good. But the fishes in the lake dined too heartily on the unfortunates, so that the water and shore were covered with the putrefying carcasses of fish and potato-bugs—much to the dissatisfaction of the farmers.

TOBACCO CURING.—The *Alta* takes the ground that the Culp process of tobacco curing is not a failure but a success, and that the failure of the Gilroy tobacco enterprise was owing to bad management, etc., and not to any defect in the curing process employed. If this be true it is good news. Mr. Culp, we are told, is proceeding with tobacco culture on a small scale and turning out a good article by his method of curing.

nearer the heart of the city, and within easy access of all lines of communication. Lafayette plaza on Eleventh street, between Jefferson and Grove streets, has been selected as the site for this pavilion, and if the consent of the City Council can be secured for its erection there the work is to be at once begun. The pavilion is to be 150x80 in dimensions on the ground, and will be constructed with a view to stability and permanency. The front elevation of the building will show two stories. On the ground floor will be the offices of the Association, refreshment rooms, retiring rooms for ladies and other convenient apartments. Above will be an art gallery, 80x25 in dimensions, of good height, with light carefully adapted for the most perfect display of paintings, photographs and other works of art.

In the rear of the two-story portion of the building will be one grand hall, 125x80 feet in dimension, and of the full height of the structure, designed for the general display of farm and dairy products, agricultural implements, machinery, manufactures, fancy articles, and the thousand and one articles that seek exhibition and compete for premiums on such occasions. The Association has prepared a very comprehensive and liberal premium list for this portion of the fair, sufficient to warrant the most sanguine expectations of its success. The Directors of the Association have issued a circular concerning reduced rates on railways for freighting articles to and from the fair, which all intending exhibitors should apply for. Stock should be shipped marked to the owner, at the Golden Gate Agricultural Fair, Oakland Trotting Park, Oakland, and when so shipped it will be landed within half a mile of the park, where convenient

base of Los Angeles, to the north and eastward.

The astronomical parties carry out their observations in pursuance of the methods adopted by the survey at the given points. The total area proposed to be occupied during the season of 1878 will be approximately 40,000 square miles. The whole work is in pursuance of plans proposed by Lieut. Wheeler, in April, 1872, approved by the Chief of Engineers and Secretary of War, and adopted by Act of Congress in June of that year. This plan had for its object the prosecution of a thorough detailed and economic topographical survey of the territory of the United States west of the one-hundredth meridian, embracing 1,443,360 square miles.

A CALIFORNIA DRIER FOR TEA-MAKING.

Since writing a paragraph which appeared in last week's *PRESS* concerning the substitute of machinery for hand labor in preparing tea, we have had the pleasure of reading a letter from a tea-grower in Louisiana who proposes to use Mr. B. B. Blower's drying house for curing his tea leaves. He says the tea shrub grows there as readily as any other shrub, and they produce tea to supply their own wants. In order to undertake production on a larger scale, they must have appliances for drying, and he thinks the Blower arrangement would be suitable. Mr. Blower says he has no doubt but that his arrangement would do the work well, and its large capacity would be favorable for handling such material. We trust the matter may be tested fully. If tea-making by machinery is to flourish in this country, we are quite willing that California inventions should be brought into requisition to do the work.

Lands for Sale and to Let.

Land for Sale in Napa County.

I am offering my lands in Foss Valley, ten miles north of Napa City, for sale, as follows—to wit:

One tract of 800 acres, including my homestead, 220 acres of which is choice valley land, the balance good grazing land, is well watered, has a large supply of wood, is well improved, has a comfortable dwelling of nine rooms, barn, granary, sheds, etc. Also, a good orchard and choice vegetable garden. Price, \$15.00 per acre.

Also, one tract of 1,020 acres, about 100 acres of which is valley, the balance good grazing hills, is well watered and has enough wood on it to pay for it. Price, \$5.00 per acre. Also, one tract of 300 acres, 40 acres tillable, a portion can be irrigated from springs, has a large amount of wood on it and 500 rods of stone fence. Is well suited to running a small dairy, and raising pigs and chickens, by which a good living can be made; price \$2,000. The climate is choice, being shut in from the chilly coast winds, but has just breeze enough to make it pleasant; title perfect. The above lands lay contiguous. I will sell the whole or either one of the above tracts on easy terms a liberal portion can remain at 10 per cent. per annum. If desired, will sell with the land, 1,500 head of Spanish Merino sheep. Come and see me, as I am determined to sell. Address the undersigned at Napa City. **WILLIAM CLARKE.**

FINE RANCH FOR SALE.

One thousand six hundred acres of deeded land, in T. P. 19, N. R. 6 W., in Colusa County, situated near Stony Creek, on the county road, from Leesville to Elk Creek, comprising No. 1 farming land, and first-class grazing lands, all enclosed. Good house, seven rooms, well finished and painted. Two large barns, one wagon house, one wool house, large store house, wood house and other small buildings complete. Two good wells of pure cold water and a large spring of never-failing water running about one mile through the ranch. The house is surrounded with shade and ornamental trees. All the farming utensils and about 50 tons of hay will be thrown in if purchased soon. Any one wishing to engage in the dairy, or stock business of any kind, cannot find a better location in the State. Price, \$7.50 per acre, one half down and the balance to suit purchaser. For further particulars, apply to James W. Good, Colusa, or the undersigned.

DANIEL JOHNSON,

Elk Creek P. O., Colusa County, Cal.

FARM FOR SALE.

\$4,000.—Two Hundred Acres of Land in Mendocino County.

Thirty miles from the county seat, and 20 miles from the Coast, one of the healthiest localities in the State, especially for consumptives. The place is fenced off in six different fields. Plenty of water and timber for all purposes. A good orchard. Vegetables of all kinds grow well. A good dwelling with six rooms, ceiling and painted inside, good frame barn, granary, storehouse, smokehouse, etc.

Also, Six Hundred acres of grazing land, well fenced, three miles from the above farm, plenty of water and timber for all purposes. Price, \$2,250.

For further particulars, address "B. T." care of DEWEY & CO., PACIFIC RURAL PRESS office, San Francisco, Cal.

West Berkeley Lumber Yard, ALAMEDA COUNTY.

(Successors to Z. B. Heywood & Co.)

Lumber, Shingles, Sash, Doors, Lime, Brick, and Builders' Hardware

Sold at the Lowest San Francisco rates. Strict attention given Country Orders. Boats loaded at wharf for all points on the San Joaquin and Sacramento rivers. Cars of the C. P. R. R. Co. loaded at the yard. Orders received at 22 California Street, San Francisco, or at the hardware store of G. W. Babcock, 955 Broadway, Oakland.

JOHN F. BYXBEE, Proprietor.

THOMAS RICHARDSON, Manager.

ANDERSON SPRINGS, LAKE COUNTY, CALIFORNIA.

Nineteen miles from Calistoga, five miles from Middletown, and ten miles from the Great Geysers; between which and Anderson Springs there is a daily line of Stages.

Hot Sulphur Water for Rheumatism, Paralysis, etc.; Cold Sulphur for Dyspepsia, Diseases of the Stomach and Bowels. Scenery unsurpassed. Climate mild and equable. Consumptives generally improve in health, and asthmatics are invariably relieved. Trout Fishing on the grounds. Deer Hunting in the immediate vicinity. Accommodations and Cookery good. Board from \$10 to \$12 per week.

Take the Lakeport Stage that leaves Calistoga, Tuesday, Thursday and Saturday. Fare to Anderson Springs, \$2.50. **ANDERSON & PATRIQUIN, Prop's.**

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Families wishing to spend the summer in the country will find this a cheerful home, and beautiful scenery of such endless variety as tempt to healthful exercise and recreation. We furnish good accommodations and an excellent table. Good fishing and hunting on the premises. Two trains from San Francisco, per Vallejo and Napa Valley Railroad, pass the Station daily.

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LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.
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N. B. The next school year will commence July 30th.

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Washington, Alameda County, California.

The Thirteenth semi-annual term of this Institution will commence on

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For catalogues and further information, address **S. S. HARMON, Principal.**

Washington, Alameda Co., Cal.

UNIVERSITY OF CALIFORNIA.

The August examinations for admission to the Colleges of Letters and of Science, will be held at Berkeley on WEDNESDAY, THURSDAY and FRIDAY, August 7th, 8th, and 9th, each day, at 10 A. M.

The University year begins August 8th. By order, **M. KELLOGG, Dean.**

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Land Warrants and Scrip of all Kinds For cash, or part on time. Good title given or no pay. Have you any lands with an imperfect title to sell, or choice vacant lands you know of which could be located to advantage; or claims not lawfully held, which we could contest. Let me hear from you in full, and I will do my best to inform you what is to your advantage. I will mail you a circular explaining all, and a copy of the new Pension Law. Address, (plainly)

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13th INDUSTRIAL EXHIBITION.

SAN FRANCISCO, CAL., 1878.

The Managers have the honor to announce to the public that the Thirteenth Grand Exhibition of SCIENCE, ART and INDUSTRY, given under the auspices of the Mechanics' Institute, will open at the Pavilion on Market, Eighth and Mission streets, on

TUESDAY, AUGUST 13th, 1878.

Great and unusual attractions will be presented to visitors. Mining, Agricultural and other machinery will be in motion. Pacific Coast Manufactures, Minerals and products of the soil will be fully represented, beside many new and interesting novelties never before exhibited on this Coast. The

ART DEPARTMENT

Will be under the supervision of the San Francisco Art Association, a guarantee for excellence and completeness. Local Art will be specially represented, as also works of noted foreign artists, selected from the private galleries of this City. The

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Each afternoon and evening a first-class instrumental concert will be given by the best soloists and accomplished musicians of this City, with a daily change of programme of the best and most popular music.

No expense or pains will be spared by the Management that will add to the comfort or convenience of visitors. Applications for space or information can be obtained from the Secretary, at the office, 27 Post street.

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J. H. GILMORE, Supt.

J. H. CULVER, Sec'y.

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42 California Street,

SAN FRANCISCO CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

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MANAGER AND CASHIER,

ALBERT MONTPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

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A personal experience of over ten years, and an extended acquaintance with the wants of employers and employees of the Pacific Coast, give us facilities not easily acquired for meeting the requirements of the public in every department of labor. Special attention given to procuring farm help of every kind, both male and female; experienced men for farm machines; MILK MEN, BUTTER and CHEESE MEN, MILLERS, BLACKSMITHS, CARPENTERS, WHEELWRIGHTS, QUARRYMEN, SHEPHERDERS, ORCHARDISTS and GARDENERS.

We take special pains also to furnish the best of Scandinavian, German, French and Irish domestics. Gentlemen connected with the office, and speaking these languages, give us extended acquaintance with this class of help, and enable us to furnish the best to be had in San Francisco at very short notice. All orders promptly attended, free of cost to the employer. Address by letter or in person,

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The Property of the Duncan's Mills Land and Lumber Company,

Sixty miles from San Francisco, at the terminus of the North Pacific Coast Railroad, Sonoma County, is offered for sale on very favorable terms.

There are 3,500 acres of Redwood Timber land, new steam Saw-mill, general store, dwellings, logging railroad, water works, etc.

Satisfactory reasons for selling will be given to prospective purchasers.

Also, if desired in connection with the above, a lumber yard on the Bay of San Francisco, having superior facilities for shipping by rail or by water, and having a large and constantly increasing business.

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Cash Capital, Paid up - - \$200,000

Assets, - - - - - \$326,617

Surplus to Policy Holders - \$324,000

And Unlimited Liability of Stockholders.

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FERD. K. RULE, Secretary.

I. G. GARDNER, Vice-President and General Agent.

STOCKHOLDERS:

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G. W. Colby, Butte County. A. B. Nally, Santa Rosa.
G. P. Kellogg, Salinas. A. Wolf, Stockton.
Charles Laird, Salinas. C. J. Cressey, Stanislaus Co.
Carr S. Abbott, Monterey. I. C. Steele, San Mateo.
I. G. Gardner, San Francisco. A. W. Thompson, S. F.
A. D. Logan, Colusa. J. C. Merryfield, Dixon.
E. W. Steele, San Luis Obispo.

PRINCIPAL OFFICE:

209 Sansome Street, San Francisco.

SEMI-ANNUAL STATEMENT

— OF THE —

Grangers' Bank of California,

Incorporated under the laws of the State of California, April, 1874.

Published in Compliance With Law.

July, 1878.

Capital Stock Subscribed\$1,350,000

(Payable in 10 installments of 10% each.)

Capital paid up in U. S. gold coin . \$385,000

(On three installments levied.)

COMPARATIVE STATEMENT.

Capital paid up in Gold Coin at the opening of the Bank:

In July, 1874	25,800 00
In January, 1875	64,200 00
In July, 1875	110,500 00
In January, 1876	168,400 00
In July, 1876	210,000 00
In January, 1877	295,000 00
In July, 1877	336,000 00
In January, 1878	350,000 00
In July, 1878	385,000 00

State of California, City and County of San Francisco.—G. W. Colby and A. Montpellier being each duly sworn, severally depose and say: That they are respectively the President and Cashier of the Grangers' Bank of California above mentioned, and that the foregoing statement is true. San Francisco, July 15th, 1878.

G. W. COLBY, President.

A. MONTPELLIER, Cashier and Manager.

Subscribed and sworn to before me this 20th day of July, 1878.

[Seal] J. ROBERT READ, Notary Public.

Statement of the Actual Condition and Standing of the

Grangers' Bank of California.

ASSETS.

Loans and Discounts and Current Accounts (secured by Mortgage and other Collateral).	\$536,160 77
Real Estate—Bank's interest in Grangers' building, San Francisco.	33,400 00
Real Estate in Sonoma and Solano counties.	8,889 42
Office Furniture and Safe in Vaults.	2,007 05
Cash on hand.	73,431 52
	\$659,508 76

And that said Assets are situated in the following counties, to-wit: San Francisco, Alameda, Nevada, Contra Costa, Yolo, Solano, San Joaquin, Stanislaus, Merced, Kern, Tulare, Sonoma, Napa, Tehama, Butte and Colusa.

LIABILITIES.

Capital Stock (3 installments levied).	\$403,000 00
Deposits on Current Account, Certificates of Deposit, Term and Demand Accounts.	217,589 77
Special Deposits by Stockholders, to be applied to future installments on Capital Stock subscribed.	6,100 00
Dividends unclaimed for.	3,612 45
Profit and Loss and Interest Accounts, being undivided profit since last annual meeting, October, 1877.	28,486 54
	\$659,508 76

ANNUAL DIVIDENDS PAID.

In 1875	71% on Capital paid up.
In 1876	10% on Capital paid up.
In 1877	10% on Capital paid up.

State of California, City and County of San Francisco.—G. W. Colby and A. Montpellier, being each duly sworn, severally depose and say that they are respectively the President and Cashier of the Grangers' Bank of California, above mentioned, and that the foregoing statement is true. San Francisco, July 15th, 1878.

G. W. COLBY, President.

A. MONTPELLIER, Cashier and Manager.

Subscribed and sworn to before me this 20th day of July, 1878.

[Seal] J. ROBERT READ, Notary Public.

BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

CATTLE.

BARRETTO & CO., Downey City, Cal., breeders of thoroughbred Jerseys Bulls and Bull calves for sale.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

GEORGE McCracken, San Jose, Cal. Pure hooded Cotswold Sheep for sale.

POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importers and Breeders of Thoroughbred Poultry. Eggs for hatching.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

C. P. STONE, San Francisco, Cal., Importer and Breeder of High Class White Leghorn Fowls.

SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

W. & J. ROBINSON, Hanford, Tulare Co., Cal., Importers and Breeders of Thoroughbred Berkshire Swine and Pure Brown Leghorn Fowls. Scotch Colley (Shepherd) Pups for sale. Imported parentage on both sides.

A. J. TWOGOOD, Riverside, Cal., Importer and Breeder of Pure Bred Poland-China Hogs.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

BEES.

N. S. AMES, Napa City, Cal., Importer and Breeder of Italian Queen Bees. Queens Imported from Europe, \$10 each. Tested Queens, \$3.

J. D. ENAS, of Sunny Side, Napa, Importer and Breeder of Italian Queen Bees from the best districts in Italy. Light or dark, tested homebred Queens, Nucleus, three frames if desired. Address as above.

Poultry.

THOROUGHbred POULTRY.

116 Acres

DEVOTED TO

FANCY

POULTRY.



Unlimited Range.

Healthy Stock.

Largest Yards

on the Coast.

Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.

Safe arrival of Poultry and Eggs Guaranteed.

Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents.

Send stamp for price list. Address

M. EYRE, Napa, Cal.

EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

DALTON & GRAY,
Commission Merchants,

WHOLESALE DEALERS IN

All Kinds of Country Produce.

404 & 406 Davis Street, San Francisco.

Consignments Solicited.

C. & F. NAUMAN & CO.
Wholesale Commission Merchants,

ALL KINDS OF

Farm and Dairy Produce Sold on Commission. Butter, Eggs, Poultry and Game a Specialty.

231 WASHINGTON STREET, San Francisco (Between Front and Davis.)

CHAS. NAUMAN.

FRANK NAUMAN.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce.

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

BEE RANCH FOR SALE.

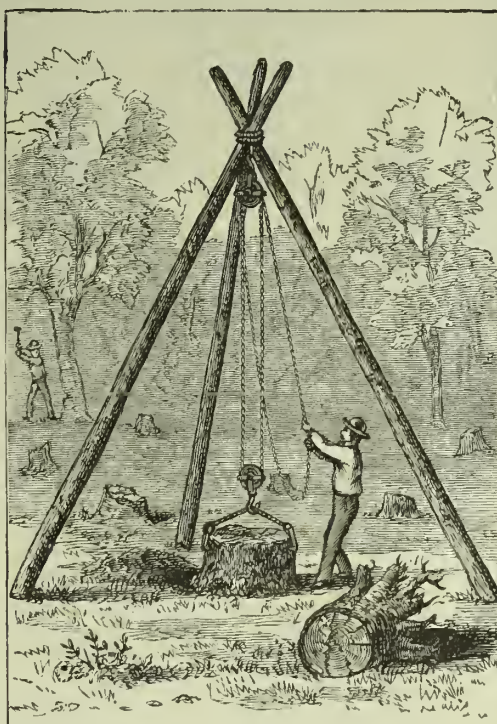
One of the best ranches in the State. At present working 375 stands Italian Bees. Apply for particulars to

D. W. McLEOD,

Riverside

WESTON'S

DIFFERENTIAL PULLEY BLOCKS.



One Man Can Easily Lift
1,000 Pounds.

Load Always Suspended; it
can never "Run Down"

Lowering Effected by Pulling
the Slack Chain.

One Man With This Tackle
is Better than Four or
Five with the Ordinary
Double Block.

AS APPLIED

TO STUMP PULLING.

The general utility of this Pulley and the many different ways in which it can be applied, render it especially serviceable for agricultural purposes

It can be used successfully as a Stump Puller and Remover of Heavy Stones. To Farmers and Woodmen this Pulley is invaluable, as it economizes both time and labor. In half the time it enables one man to accomplish work which formerly taxed several to perform. For sale by

DUNHAM, CARRIGAN & CO., Agents.

Blunt's Universal

Surface and Deep-Well Pumps. Send for Circulars.

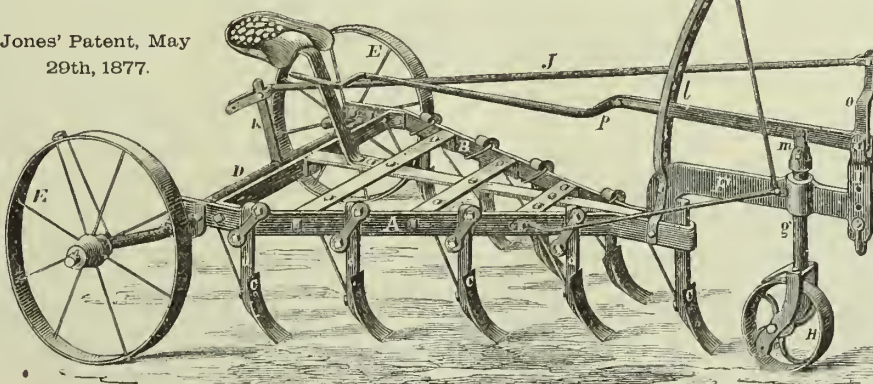
DUNHAM, CARRIGAN & CO.

SAN FRANCISCO.

HOLLY & MAGOON'S CULTIVATOR.

Manufactured by Holly & Magoon, Stony Point, Sonoma Co., and
Holly & Jones, Lakeville, Sonoma County.

Jones' Patent, May
29th, 1877.



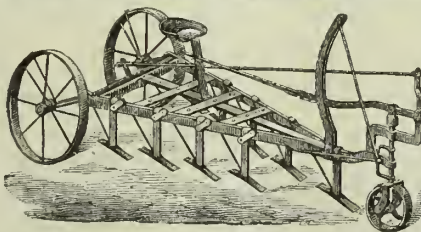
This Cultivator is made by practical men, after years of experience, and better meets the wants of California farmers than anything before offered.

Made of the best material (with wood or iron frame), and warranted in every respect.

Prices

REASONABLE.

For further information address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Francisco and Sacramento, Cal.

Our new
DOUBLE-BOX WHEEL

Is a decided improvement, to which we wish to call the especial attention of those who would secure the best and most durable.

Our STRAIGHT CHISEL CULTIVATORS (patent applied for) are self-sharpening and made of the best cast steel, with an improved method of fastening to the standard, approaching perfection itself.

GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

OFFICERS AND DIRECTORS.

DANIEL INMAN, (PRESIDENT).
A. D. LOGAN, (VICE PRESIDENT).
AMOS ADAMS, (SECRETARY).

JOHN LEWELLING, (TREASURER).
G. W. COLBY.
I. C. STEELE.

W. L. OVERHISER.
A. T. HATCH.
O. HUBBELL.

W. W. GRAY.

THOS. FLINT

SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

Stock Notices.

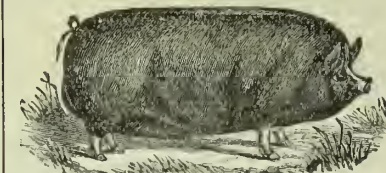


SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

E. W. WOOLSEY,
Berkeley, Alameda County, Cal.

BERKSHIRES.



Breeder and Importer of the "Crown Prince," "Sambo," and "Bob Lee" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.

PETER SAXE, Russ House, San Francisco, and Los Angeles City, Cal.

\$25 EVERY DAY Is warranted using JILZ WELL AUGERS and DRILLS. Took the first premium at the Great Exposition. They bore any diameter and depth; 100 feet a day, through earth, sand or rock. Pictorial auger book free. Address Col. PETER SAXE, Los Angeles, Cal., Agent for Pacific States.

THOROUGHbred
SPANISH MERINO SHEEP!

200 Extra Rams

For sale. Yearlings and two-year-olds. In size, quality and condition unsurpassed. Also, 100 ewes at prices to suit the times. The nucleus of this flock was from a purchase made from Severance & Peet in 1873. My ranch is at Haywards, Alameda county, and may be reached by rail from San Francisco, seven times daily. Parties desiring choice sheep should see this flock before purchasing elsewhere.

J. H. STROBRIDGE.

CHOICE PIGS FOR SALE.

I have a few fine Lancashire pigs for sale, now about four weeks old. Bred from choice imported stock. Address

GRANT I. TAGGART,

Eighth Street, near Broadway, Oakland

GILBERT & MOORE,

Manufacturers of

School, Office, Church, Lodge and Household Furniture, Etc.

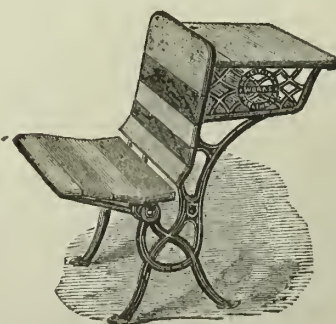
Sole Agents of Pacific Coast for the

Sterling School Furniture Company.

THE BEST IS THE CHEAPEST IN THE END.

"THE PEERLESS."

Unsurpassed for Elegance, Comfort and Durability.



The Best Made School Desk in the World.

Six sizes made, single and double. Send for our Illustrated Catalogue and Price List. School supplies of all kinds in stock and for order. Good reliable agents wanted in every town on the Coast.

We offer the best Desk as cheap as the poorest that can be bought.

GILBERT & MOORE,

219 Bush Street, San Francisco, Cal.



Calvert's Carbolic
SHEEP WASH,
\$2 Per Gallon.

After dipping the sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

BEE! QUEENS!! HIVES!!!—See advertisement under this head in last week's RURAL.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

RAILWAY CAR TRUCKS.—Wm. R. Hamilton and G. Canning Smith, Mendocino, Cal.
WINDING-SCREENS.—John Brizer, Alvarado, Cal.
HOUSEHOLDERS.—Hiram M. Clemens, Gold Hill, Nev.
NON-CONDUCTING COMPOUNDS.—Geo. R. Evans, San Francisco, Cal.
SAFETY HOOKS FOR HARNESS SADDLES.—Wm. H. Henderson, San Jose, Cal.
APPARATUS FOR TRANSMITTING POWER AND MOTION.—Carl L. Heinrich, San Francisco, Cal.
TOOL-TABLE FOR SEWING MACHINES.—Eugene Moreau, San Francisco, Cal.
VALVES FOR WATER CLOSERS.—Wm. Smith, San Francisco, Cal.
SHIELDS FOR THE TOPS OF CRIBBLES OR MELTING POTS.—Jno. Felix, San Francisco, Cal.
REISSUES.
CLACK-VALVES FOR PUMPS.—Wm. C. D. Boly, Virginia City, Nev.
TRADEMARKS.
COD FISH.—Lynde & Hough, San Francisco, Cal.
CHEMICAL COMPOUND FOR THE COMPLEXION.—Chas. R. Burroughs, San Francisco, Cal.

The Fair Season.

The following is a partial list of the coming fairs. We shall be pleased to add to it if readers will send us the dates and locations of their respective exhibitions:

San Francisco Mechanics' Institute, San Francisco, August 13th to September 14th.
 California State Agricultural Society, September 16th to 21st, inclusive.
 Oregon State fair, at Salem, October 8th to 18th, inclusive.
 Nevada State Agricultural, Mining and Mechanical fair, at Reno, October 7th to 12th, inclusive.
 Montana Agricultural, Mineral and Mechanical fair, at Helena, September 23d to 29th, inclusive.
 Sonoma and Marin district fair, at Petaluma, September 23d to 25th, inclusive.
 San Joaquin valley district fair, at Stockton, September 24th to 28th, inclusive.
 Northern district fair, at Marysville, September 23d to 28th, inclusive.
 Golden Gate district fair, at Oakland, September 9th to 16th, inclusive.
 Napa and Solano district fair, at Vallejo, September 3d.
 Monterey county district fair, at Salinas City, October 8th to 12th, inclusive.
 Siskiyou county fair, at Yreka, October 2d to 5th, inclusive.
 El Dorado county fair, at Placerville, September 13th to 15th, inclusive.
 Santa Clara valley fair, at San Jose, September 30th to October 5th, inclusive.
 Stanislaus County Stock Growers Fair, at Modesto, October 9th to 11th, inclusive.
 Southern California Horticultural Fair, at Los Angeles, October 14th to October 19th, inclusive.
 Southern California Agricultural Society's fair, at Los Angeles, October 14th to October 19th, inclusive.

CALIFORNIA FRUIT IN NEW YORK CITY.—We quoted last week a brief item from the New York Evening Post to the effect that the first carload of this season's California Bartlett pears had arrived in New York July 15th in good order, being from the ranch of Hon. C. W. Reed, of Sacramento county, and consigned to Davis & Sutton, of 75 Warren street, New York. We have since learned by letter that the consignment was not by refrigerator car, but by one of the common "fruit cars" of the C. P. R. R. It was attached to a passenger train and reached its destination in seven days, the quickest fruit transit to New York yet recorded. The fruit arrived in splendid condition. The achievement is most pleasant to contemplate. A few years ago the passage of delicate fruit, over 3,000 miles by rail without refrigeration, and reaching its destination in perfect condition, would indeed have been a startling proposition. The result is hopeful for fruit growers in this State, and reflects credit upon the receivers, Messrs. Davis & Sutton, of New York, for they have labored patiently and perseveringly to advance the trans-continental traffic in California fruit. We trust that the returns of sales will prove so satisfactory that our New York friends will receive all the fruit they can dispose of at profitable prices. Of the sale of the fruit the New York Producers' Price Current says: "There is a fair demand for the pears at \$5 per box. A few plums were also received and placed at \$8 per box. The freight on the cars amounted to \$1,200."

A CHEERFUL RENEWAL.—A subscriber of the Rural Press at Suisun City, in remitting his advance subscription, says: "This is the most cheerful subscription I ever made. Please continue the Rural another year." etc. This is inspiring. The cheerful support of our readers is what we continually work for.

THE PACIFIC LAND AND TRUST COMPANY.—The card of this company will be found in another column, inviting correspondence with those who wish to purchase, or have land and property for sale or rent. We see good names of gentlemen, with whom we are personally acquainted, among its list of officers.

THE CALIFORNIA FURNITURE MANUFACTURING Co., whose card appears in this issue, is a leading house in this city. Their establishment is a large and magnificent one, well worthy of a visit by citizens and visitors from abroad.

Nash & Klees' New Attachment or Grain Cleaner.

EDITORS PRESS:—At the manufacturing establishment of Nash & Klees, No. 264 K street, Sacramento, will be found a large assortment of fanning mills and grain separators, of three kinds, warranted to clean from 60 to 200 bushels per hour perfectly. In addition to the fanning mills, your correspondent found Messrs. Nash & Klees busy at a new work which has been just brought in general use this season, although it has been at work previously to test its construction. I refer to an enlarged "grain cleaner," an attachment to a threshing machine of large capacity, which will clean merchantable grain as fast as it passes from the machine, through the additional separator.

The main object is to gain pure unmixed grain or seed of any description, making more thorough work than the combined thrasher of present use. This work has been a subject of considerable thought, time and expense; and Mr. Nash has been in frequent communication with Mr. H. E. Wright, of San Joaquin, who has also aided him, and the result is the construction of a new attachment which is now before the public, and has proved its value to the satisfaction of the originator. Mr. Nash first constructed the plan and made the first one for Mr. H. E. Wright. Mr. Wright has about 20 in his vicinity. Dr. Glenn has seen the improvement and learned the clean work it performs, and has ordered one to be used on his farm. Nash & Klees intend to apply for a patent in due time. The producer of grain will find it well to market clean grain, as it adds a large percentage to the price when delivered to the mill, or offered in market. Mr. Nash has fully tested his device, having run through seeds from alfalfa, up to beans, and can produce testimony corroborating the fact.

The amount of foul grain raised this year throughout the State will be unusually great. It behooves the producer to save as much grain as possible, and if this attachment was used throughout the State no doubt thousands of dollars would be saved, and this cheat question would be settled at once.

Mr. Nash has received letters from parties in San Joaquin, stating that owners of grain that has passed through his new attachment have received from 10 to 15 cents more per cental at the mills. The millers are glad to pay the extra price, as it saves them so much extra work to prepare the grain to be ground.

Those who intend to visit the coming fair in September next will have the pleasure of seeing the machine on exhibition on the fair grounds, where it will be attached to a large threshing machine, and all grains will be run through to test its work.

Messrs. Nash & Klees offer through the State fair a special premium of \$25 for a better grain cleaner or fanning mill than the "Nash & Klees," to be tested by a committee of farmers on the ground on Thursday, September 19th, 1878.

Sacramento, July 25th.

LITTON SPRINGS.—This property has recently been purchased by Judge B. Lathrop, formerly of this city, now of Healdsburg, Sonoma county, and Geo. F. McPherson, of Oakland. The tract contained 2,700 acres, which has been subdivided into 20 farms of 120 acres each, which are offered to the public at \$40 per acre. Three hundred acres reserved, with the hotel, springs, cottages, etc., for shareholders, a twentieth of which is deeded to each purchaser of a farm. Personal application can be made to Judge Lathrop at 316 Pine street, Wednesdays and Thursdays of each week, from 10 to 2.

Woodward's Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a box-constrictor have just been added. New stars are constantly engaged for the Pavilion exercises. Rates of admission as usual.

OCEAN VILLA, SANTA CRUZ.—Mr. Geo. H. Bliss, Proprietor of this flourishing watering place, offers large, well furnished rooms, single or in suites, to visitors. Also cottages for families that desire them. Grounds large, romantic and pleasant. Situated forty feet above tide water, having a beautiful view of the Bay, Ocean, City and Mountains. Premises extend to river's edge, affording rare facilities for boating, bathing and fishing. No pains spared to please guests. Address, P. O. Box 166, Santa Cruz, Cal.

POPULAR MUSIC.—Make your homes merry and popular with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 106 Kearny Street. The Rural Press can offer to introduce you there.

"CASH PAID PROMPTLY."—May Bros., Galesburg, Ill., want to hire agents for their late improved Windmills, the cheapest, strongest and best in use. Retail price, \$50. Write for terms.

Mr. W. J. Woodley, who took out a Canadian Patent some four years ago, is requested to call at the MINING AND SCIENTIFIC PRESS PATENT AGENCY OFFICE. Business of importance.

S. F. MARKET REPORT.

Note.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, July 31st, 1878.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday.....	10s	—@10s	3d	10s	3d@10s	6d
Friday.....	10s	1d@10s	5d	10s	4d@10s	8d
Saturday.....	10s	1d@10s	5d	10s	4d@10s	8d
Monday.....	10s	1d@10s	5d	10s	4d@10s	8d
Tuesday.....	10s	1d@10s	4d	10s	4d@10s	8d
Wednesday.....	10s	—@10s	4d	10s	4d@10s	8d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1876.....	9s	6d@9s	8d	9s	8d@10s	2d
1877.....	12s	3d@12s	6d	12s	6d@13s	2d
1878.....	10s	—@10s	4d	10s	4d@10s	8d

The Foreign Review.

LONDON, July 30th.—The Mark Lane Express says: Wheat cutting is now becoming general, and judging from recent agricultural advices, Wheat seems improved wonderfully in many parts of the country. The past month's sunshine has repaired the injury caused by the rainfall of May to an unlooked for extent, excepting in districts where the drouth was severe, causing premature ripening. Prospects for the Barley crop are variable and generally unpromising; particularly on lighter soil the crop will be certainly light. Oats and Beans promise fairly.

The Grain trade in London and the provinces is devoid of any special feature, but prices are well maintained, considering the proximity of the harvest. There is an undercurrent of steadiness observable, and the opinion generally obtains that, whether bought for consumption or speculation, Wheat at present prices cannot do much harm to millers or speculators. One strengthening influence at work is the continued Continental demand. White Wheat on the spot and cargoes off coast have been taken for Continental account, and the fact that prices are stationary in the face of liberal imports and improved crop prospects is in a great measure due to this legitimate increased demand. Arrivals of Wheat cargoes off coast, especially from America, appear likely to be small for the next few weeks; but as brilliant prospects are entertained of the crop on the other side of the Atlantic, the probability of an American rise here is more or less remote. With moderate arrivals at ports of call, the floating cargo trade for Wheat is steady, without quotable change in values. The demand for the Continent continues and helps to support prices. Maize is dull. Barley is unchanged.

Freights and Charters.

The Freight market still continues inactive. This inactivity may be accounted for from the large amount of disengaged tonnage in port, from the fact that producers are still holding back their grain, and from the temporary disarrangement of the usual channels of gathering and shipping our grain owing to the late sudden decrease of Mr. Friedlander. There is very little prospect of any very early improvement in Wheat freights for the present. Iron ships are worth £2 7s 6d to a direct port, and moderate sized wooden ships 2s 6d less. Wooden ships are difficult to quote, as they are not desirable; but they exercise an important influence on the market from the well-known fact that they can and will accept low rates if forced to, and by so doing they break down the market for all classes of vessels. Still, Freights are firm, under the impression that, as we have a large crop, it must be sent away. There is now 53,106 tons engaged to load with Wheat, and 53,192 tons disengaged. The tonnage now on the way to this port is set down at 216,633 tons.

Eastern Grain Markets.

CHICAGO, July 27th.—There has been much excitement and great activity on 'Change the past week, which at times reached to a state bordering on wild confusion. The major part of the interest has centered in the Wheat corner, which was a joint effort of the Chicago and Milwaukee Commission, and which took Wheat from the lowest point it has reached for nearly three years, and carried it up in Milwaukee over 20, and here 15 cents. Wheat is in very strong hands, such as George in Milwaukee, who is called "King of the Corner," and Fisher, Armour & McEnery here. The two markets have co-operated in pushing prices up, and in spreading broadcast extravagant reports of disaster to the crops in the Northwest. A new feature in the market is the great receipts of Winter Wheat and the appearance of an established market for that grade of grain. Receipts of Winter Wheat are gradually becoming heavier, and this week exceed receipts of Spring. It is of excellent quality, and is destined to figure largely on 'Change in future. Cash Wheat was strong and higher, going up daily from 97c to \$1.05, the highest price to-day and the lowest to-day. August Wheat sold from 86c up to 97c, the greatest fluctuations

being on Friday, when sales were at 92½@97½c. Operators generally look for the corner to hold sway until the month ends. Corn has sympathized in a measure with Wheat, and has fluctuated but a little, but the advance of the first half of the week was lost in the last half. "The short crop" scare sent cash up to 41, but it stayed there only one day and then dropped quickly. The Corn crop reports indicate that there is an immense and promising acreage in the Corn-growing belt States: August, 37½@39½. Oats were firmer in sympathy, but the advance was insignificant except for cash, which went up to 27. Sales of August were 22½@23½. Rye took a rise from 51½ to 54½, closing very firm. Barley was very excited. In Provisions there has been a good, fair speculative business, and prices have advanced daily, with a trifling drop to-day. Sales of August Pork, \$9.25@9.70. Lard for August sold at \$6.92½@7.10. The closing cash prices were: Wheat, \$1.05½; Corn, 39c; Oats, 26½; Rye, 54@54½c; Barley, 70½c; Pork, \$9.55; Lard, \$7.10.

NEW YORK, July 27th.—The reports of great damage to the crops in the Northwest is now pronounced altogether exaggerated. While the Wheat crop in certain portions of the Northwestern States has unquestionably been more or less damaged by the recent excessive heat and rains, it is confidently asserted that the loss will be fully compensated by the heavy yield in other localities and from the increased area under cultivation. Minnesota, notwithstanding her damage, will increase her last year's total yield of 35,000,000 bushels. The Wheat market has been in an abnormal condition during the week, in consequence of the corner in Chicago and Milwaukee. New York prices have been above Liverpool and as a consequence very little shipping has been done. New York prices closed on Saturday last from 5 to 7c higher than that day week, bringing Spring up to \$1.05@ \$1.15 on the spot, with \$1 bid for No. 2 Spring for September, and \$1.02½ for August. Corn has also brought more money, closing at 44@49 for export grades with an active business in options. Business generally is improving in New York, especially in several important branches of manufactures, such as Cotton, Woolen, etc.; and the indications are favorable for a good fall trade.

Eastern Wool Markets.

BOSTON, July 26th.—The market for Domestic is unchanged. The excitement is quite subsided, and the market is now steady and firm at the current prices of last week. Seven million pounds of Domestic Wool, sold in this market during the past three weeks, was placed at a very small advance on cost, although the Wool was purchased at the lowest prices in the interior. Combing fleeces have been more sought after than any other kind, and dealers have found ready sale for all available lots. Desirable lots of Medium Combing sold at better prices, round lots having been placed at 45c. There is no improvement in fine Delaine, and some dealers found it difficult to obtain recent current rates. Sales comprise Ohio and Pennsylvania No. 1 XXX and above, at 36½@39; Michigan, 34½@36½; Wisconsin, 34@36; Indiana, 35; Washed Combing and Delaine, 26@30; Texas, 15@27½; Colorado, 17@19; Territory, 18@28; Scored, 53@78; Tnb-Washed, 38@40; Super and X Pilled, 32@41. Transactions in California Wool have been quite large, comprising 523,000 lbs, at 20@30 for Spring, and 26 for Fall, the best Northern Wools selling at 28@30. The total sales of Domestic Wool for the week aggregate 2,293,400 lbs.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks.

ARTICLES.	WEEK July 10	WEEK. July 17.	WEEK. July 24.	WEEK. July 31.
Flour, quarter sacks.....	20,445	25,827	22,300	96,384
Wheat, centals.....	101,305	113,742	235,223	215,274
Barley, centals.....	14,523	19,132	18,757	28,076
Beans, sacks.....	459	218	275	87
Corn, centals.....	10,876	1,700	496	750
Oats, centals.....	1,530	1,710	1,361	3,294
Potatoes, sacks.....	8,387	13,525	12,001	11,120
Onions, sacks.....	530	396	330	314
Wool, bales.....	3,824	2,770	3,770	7,133
Hops, bales.....	42	.....	27	13
Hay, bales.....	1,234	2,416	1,525	2,202

BAGS.—Prices have taken a decidedly upward tendency during the week in grain and flour sacks, but no change is noticed in wool or potato bags. The cause of the advance is attributed to a combination among dealers.

BARLEY.—The receipts have been large, but the market appears steady. Brewing, from 95c for ordinary, to \$1.35 for choice old Brewing.

EGGS.—California Eggs have advanced half a cent; ducks' Eggs from 2 to 5c.

FRESH MEAT.—Fresh Meats are abundant and cheap; Pork is declining in price, Mutton and Beef are unchanged.

HAY.—The only sale reported on Wednesday was a single cargo of fair Wheat at \$12.50. The range for all grades is from \$7 to \$14.

HOFS.—Nothing new in this market. Emmet Wells reports the New York market about as the previous week, inactivity being the ruling feature. "The consumption of lager, however, during the heated term having been excessively increased, those brewers who are short of stock will soon have to come in and replenish. The export trade has dwindled down to almost nothing and is not likely to revive this season. Crop reports are of about the same tenor as last week; lice are in the yards in considerable quantity, but as yet have done no

damage. Yards that have received proper care are looking well, while those that have been neglected naturally make a poor show. The chances are that Hops will open at considerable better prices than last year, and those farmers who are now neglecting their yards may regret it."

ONIONS—Onions have slightly improved. **POTATOES**—Potatoes have improved somewhat in price from last week's quotations, with fair supply.

PROVISIONS—The trade in Provisions has been quiet during the past week, and prices are unchanged.

VEGETABLES—It is thought the price of Tomatoes will advance within a day or two above our present quotations. Canteloupes and Watermelons have materially declined since our last reference. Green Corn has declined 2c. Everything else is unchanged.

WOOL—The market remains quiet, and all classes except strictly choice are weaker. We note sales by Miller & Co.: 35,000 lbs Nevada, 22c; 25,000 lbs Humboldt, 25c; 25,000 lbs San Joaquin, 15 to 18c.

DOMESTIC PRODUCE.

(WHOLESALE.)

WEDNESDAY M., July 31, 1878.

BEANS & PEAS.		FILBERTS.		ONIONS.	
Bayo, doz.	5 75 @ 00			Alviso.	— @ —
Butter.	4 25 @ 50			Union City, cti.	— @ —
Pea.	4 50 @ 00			San Leandro.	1 00 @ —
Red.	— @ —			Stockton.	62 1/2 @ 75
Pink.	6 25 @ 50			Sacramento River.	1 00 @ —
Sm't White.	4 50 @ 50			San Pedro.	50 @ —
Lima.	4 25 @ 50			Oregon.	— @ —
Field Pea.	1 10 @ —				
BROOM CORN.		POTATOES.		CHICORY.	
Old.	3 1/2 @ 7	Petaluma, cti.	1 00 @ 25	California.	4 @ 4 1/2
New.	4 1/2 @ 8	Humboldt.	— @ —	German.	5 1/2 @ 7
DAIRY PRODUCTS.		POULTRY & GAME.		BUTTER.	
Cal. Fresh Roll, lb.	20 @ 24	Swet.	2 50 @ —	Fancy Brands.	25 @ 26
Pickle Brand.	22 1/2 @ 25	Hens, doz.	7 00 @ 8 50	Pickle Brand, new.	22 1/2 @ 25
Firkin, old.	12 @ 16	Roosters.	5 00 @ 5 50	Firkin, old.	12 @ 16
Western Reserve.	12 1/2 @ 14	Broilers.	2 50 @ 3 50	Western Reserve.	12 1/2 @ 14
New York.	— @ —	Ducks, tame.	4 00 @ 5 00		
CHEESE.		do, Mallard.	25 @ 1 75		
Cheddar, lb.	8 @ 11	Geese, doz.	1 25 @ 1 75		
Eastern.	10 @ 12	White do.	— @ —		
N. Y. State.	— @ —	Turkeys.	20 @ 23		
Gilroy Factory.	11 @ 13	do, Dressed.	— @ —		
EGGS.		Snipe, Eng.	3 00 @ —		
Cal. fresh, doz.	30 @ 34	do, Common.	1 00 @ 1 25		
Ducks.	25 @ 30	Rabbits.	1 50 @ —		
Oregon.	18 @ 22	Illars.	3 00 @ 4 00		
Eastern.	24 @ 28	Venison, lb.	8 @ 12 1/2		
do, Pickled.	— @ —				
FEED.		PROVISIONS.		FLOUR.	
Bran, ton.	— @ 16 00	Cal. Bacon, Hvy, lb.	11 @ 11 1/2	Extra, bbl.	5 00 @ 5 50
Corn Meal.	41 00 @ 42 00	Medium.	11 1/2 @ 12 1/2	Superfine.	4 25 @ 4 50
Hay.	7 00 @ 14 00	Light.	12 1/2 @ 13 1/2	Graham, lb.	31 @ 33
Middlings.	21 00 @ 22 50	Lard.	11 @ 13		
Oil Cake Meal.	34 00 @ 35 00	Cal. Smoked Beef	10 @ 11		
Straw, bale.	25 @ 60	Eastern.	— @ —		
FRESH MEAT.		Shoulders, Cov'd	7 1/2 @ 8 1/2		
Beef, 1st quality, lb.	5 1/2 @ 6 1/2	Hams, Cal.	11 1/2 @ 12 1/2		
Second.	4 1/2 @ 5 1/2	Dupe's.	14 @ 15		
Third.	3 1/2 @ 4 1/2	Boyd's.	14 @ 15		
Mutton.	4 @ 5	Davis Bros.	— @ —		
Spring Lamb.	6 @ 7	None Such.	15 @ 15 1/2		
Pork, undressed.	5 1/2 @ 6 1/2	Ames.	15 @ 16		
Dressed.	7 1/2 @ 8 1/2	Whittaker.	— @ —		
Veal.	6 @ 7	SEEDS.			
Milk Calves.	6 @ 7 1/2	Alfalfa.	5 @ 12		
GRAIN, ETC.		Canary.	6 @ 8		
Barley, feed, cti.	90 @ 95	Clover, Red.	15 @ 16		
Brewing.	35 @ —	White.	50 @ 55		
Chevalier.	50 @ —	Cotton.	6 @ 10		
Buckwheat.	30 @ —	Flaxseed.	3 1/2 @ —		
Corn, White.	2 25 @ 3 25	Hemp.	6 @ —		
Yellow.	1 95 @ 2 00	Italian Rye Grass	35 @ —		
Small Round.	2 00 @ 2 25	Perennial.	30 @ —		
Oats.	25 @ 30	Millet.	10 @ 12		
Milling.	55 @ 65	Mustard, White.	4 @ —		
Rye.	1 12 1/2 @ 1 72	Brown.	2 1/2 @ 3		
Wheat, Shipping.	1 65 @ 1 80	Rape.	3 @ 4		
Milling.	70 @ 80	Ky Blue Grass.	20 @ —		
HIDES.		2d quality.	18 @ —		
Hides, dry.	16 @ —	Sweet V Grass.	1 00 @ —		
Wet salted.	7 1/2 @ 9	Orchard.	30 @ 30		
HONEY, ETC.		Red Top.	18 @ 20		
Beeswax, lb.	30 @ 31	Hungarian.	8 @ 10		
Honey in comb.	11 1/2 @ 12	Lawn.	50 @ —		
do, No 2.	8 @ 9	Mesquit.	— @ 25		
Dark.	8 @ 9	TALLOW.			
Strained.	6 @ 6 1/2	Crude, lb.	7 1/2 @ 8		
HOPS.		Refined.	8 1/2 @ 9 1/2		
Oregon.	4 @ 5	SPRING.			
California.	4 @ 6	S. Joaquin, 12mo free	17 @ 19		
Wash. Ter.	4 @ 6	do 6 & 7 mo do	15 @ 18		
NUTS—Jobbing.		Berry, 12mo.	13 @ 16		
Walnuts, Cal.	8 @ 9	do 6 mo.	14 @ 16		
do Chile.	7 @ 8	Scabby.	12 1/2 @ 15		
Almonds, hd shi lb.	7 @ 8	Southern Coast, free	16 @ 19		
Soft shi.	14 @ 16	do do Larry	14 @ 16		
Brazil.	14 @ 16	Northern, free.	23 @ 25		
Pecans.	13 @ 14	do, seedy & burry	20 @ 22		
Peanuts.	5 @ 6	Nevada.	18 @ 22		
		Oregon Valley.	22 @ 24		
		do, Eastern.	17 @ 20		

FRUITS AND VEGETABLES.

(WHOLESALE.)

WEDNESDAY M., July 31, 1878.

FRUIT MARKET.		PEACHES.		VEGETABLES.	
Apples, basket.	30 @ 50			Asparagus, box.	1 00 @ —
do, box.	40 @ 1 50			Beets, cti.	62 1/2 @ —
Apricots, lb.	2 @ 3			Beans, String.	1 @ 1 1/2
Bananas, bunch.	2 50 @ 3 00			Cabbage, 100 lbs	50 @ —
Bilberries, ch't	2 50 @ 3 00			Canteloupes, doz	50 @ 1 00
Cocoanuts, 100.	3 00 @ 4 00			Carrots, cti.	50 @ 63 1/2
Figs, lb.	3 @ 5			Canflower, doz	50 @ 75
Gooseberries, lb.	3 @ 5			Cucumbers, lb.	25 @ 40
Grapes, bx.	35 @ 75			Garlic, New, lb.	2 @ 3
Limes, Mex.	7 00 @ 8 00			Green Corn, doz.	4 @ 5
do, Cal. per M.	— @ —			do, Bay.	10 @ 12 1/2
Lemons, Cal M.	15 @ 25 00			Green Peas.	10 @ 12 1/2
Sicily, lb.	9 00 @ 10 00			Lettuce, doz.	2 @ —
Mangoes, 100.	3 00 @ —			Malaga.	2 1/2 @ —
Oranges, Mex.	22 00 @ 25 00			Horseradish.	7 @ 8
do, Cal.	20 @ 20 00			Rhubarb.	1 @ —
Cal.	— @ —			Squash, Marrow	— @ —
Peaches, box.	25 @ 50			fat, tn.	20 @ 30
do, basket.	50 @ 75			Summer do, bx.	20 @ —
Pears, box.	75 @ 1 75			Tomato, 30 lbs bx.	20 @ 25
do, Bartlett.	1 50 @ —			Turnips, cti.	75 @ —
Pineapples, doz.	4 00 @ 5 00			White.	50 @ —
Plums, lb.	3 @ 4			Wat'nuts, P100.	8 00 @ 10 00
Raspberries, lb.	9 @ —				
Strawberries, ch't	2 50 @ 3 00				
DRIED FRUIT.					
Apples, lb.	5 1/2 @ 7 1/2				
Apricots.	10 @ 12				
Citron.	23 @ 24				
Dates.	8 @ 10				
Figs Black.	4 @ 7				
White.	6 @ 8				

GENERAL MERCHANDISE.

(WHOLESALE.)

WEDNESDAY M., July 31, 1878.

BAGS—Jobbing.		Plaster, Golden	
Eng Standard Wheat, 12 1/2 @		Gate Mills.	3 00 @ 3 25
Neville & Co's		Land Plaster, tn 100 @	12 50
Hand Sewed, 22x36, 13 @		NAILS.	
24x36.	@	Ass'ted sizes, keg 3 00 @ 4 00	
23x40.	13 1/2 @	OILS.	
Machine Swd, 22x36, 12 1/2 @		Pacific Glue Co's	
Flour Sacks, halves.	10 1/2 @ 11	Nutsfoot, No 1, 1 00 @	90
Quarters.	6 @	Castor, No 1.	1 10 @
Eighties.	4 1/2 @ 4 1/2	do, No 2.	1 05 @
Hessian, 60 inch.	15 @	Baker's A. A.	1 25 @ 30
45 inch.	@ 10 1/2	Olive, Plagniol.	5 25 @ 5 75
40 inch.	9 1/2 @	Possel.	4 75 @ 5 25
Wool Sacks.		Palm, lb.	9 @
Hand Sewed, 3 1/2 lb. 47 1/2 @ 50		Linseed, Raw, hbl.	72 @
4 lb do.	52 1/2 @	Boiled.	75 @
Machine Sewed.	50 @	Cocoanut.	55 @
Standard Gunnies.	14 @ 15	China nut, cs.	75 @
Bean Bags.	7 @ 8	Sperm.	1 40 @
CANDLES.		Coast Whales.	40 @
Crystal Wax.	17 @	Polar.	45 @
Eagle.	12 @	Lard.	90 @ 91 00
Patent Sperm.	30 @	Oleophine.	@ 27
CANNED GOODS.		Devoe's Bril't.	22 @ 23
Assorted Pie Fruits.		Phototite.	@
2 1/2 lb cans.	2 25 @ 2 50	Nonpareil.	30 1/2 @
Tahle do.	3 50 @ 3 75	Eureka.	18 @ 42 1/2
Jams and Jellies.	3 50 @ 3 75	Barrel kerosene.	20 @
Pickles, hf gal.	3 25 @	Downer Ker.	37 1/2 @
Sardines, q box.	1 67 1/2 @ 90	Elaine.	37 1/2 @
Hf Boxes.	2 50 @ 2 75	PAINTS.	
Preserved Beef.		Pure White Lead.	9 @ 9 1/2
2 lb, doz.	4 00 @	Whiting.	12 @
do Beef, 4 lb, doz.	6 50 @	Putty.	4 @ 5
Preserved Mutton.		Chalk.	1 1/2 @
2 lb, doz.	4 60 @	Paris White.	2 1/2 @
Beef Tongue.	6 50 @	Ochre.	3 1/2 @
Preserved Ham.		Venetian Red.	3 1/2 @
2 lb, doz.	6 50 @	Averill.	Mixed
Deviled Ham, 1 lb.		Paint, gal.	
doz.	5 50 @	White & tints.	2 00 @ 2 40
do Ham, 1/2 doz.	3 00 @	Green, Blue &	
COAL—Jobbing.		Ch Yellow.	3 00 @ 3 50
Australian, ton.	8 00 @	Light Red.	3 00 @ 3 50
Coos Bay.	6 50 @ 7 00	Metallic Roof.	1 30 @ 1 60
Bellingham Bay.	6 50 @	RICE.	
Seattle.	6 00 @ 6 50	China, No 1, lb.	7 1/2 @
Cumberland.	14 00 @	Hawaiian.	7 1/2 @
Mt Diablo.	4 75 @ 6 00	SALE.	
Lighg.	13 50 @	Cal. Bay, ton.	15 00 @ 22 50
Liverpool.	7 50 @ 8 00	Common.	10 00 @ 12 00
West Hartley.	10 50 @	Carmen Id.	13 00 @ 22 50
Scotch.	10 50 @	Liverpool fine.	19 00 @
Scranton.	11 50 @	SOAP.	
Vancouver Id.	7 00 @	Castile, lb.	10 @ 10 1/2
Charcoal, sack.	75 @	Common brands.	4 1/2 @ 6
Coke, bbl.	60 @	Fancy brands.	7 @ 8
COFFEE.		SPICES.	
Sandwich Id, lb.	@	Cloves, lb.	45 @ 50
Costa Rica.	18 @ 18 1/2	Cinnamon.	22 1/2 @ 25
Guatemala.	17 @ 18 1/2	Nutmeg.	85 @ 90
Java.	22 @ 23	Pepper Grain.	15 @ 17
Manila.	18 @	Pimento.	15 @ 16
Ground, in cs.	25 @	Mustard, Cal.	
FISH.		1 lb glass.	1 50 @
Sac'to Dry Cod.	5 @ 5 1/2	SUGAR, ETC.	
do in cases.	6 1/2 @ 7	Cal. Cube, lb.	11 1/2 @
Eastern Cod.	7 @	Powdered.	11 1/2 @
Salmon, bbls.	9 00 @ 10 00	Fine crushed.	11 1/2 @
11 lb bbls.	5 00 @ 5 50	Granulated.	7 1/2 @
1 lb cans.	@ 35	Golden C.	10 @
Pkld Cod, bbls.	22 00 @	Cal. Syrup, kgs.	70 @
11 lb bbls.	11 00 @	Hawaiian Mol'ses	26 @ 30
Mackerel, No 1.		TEA.	
11 lb Bbls.	9 50 @ 10 50	Young Hyson.	
In Kits.	1 85 @ 2 10	Moyune, etc.	35 @ 50
Ex Mess.	3 25 @	Country pckd Gun-	
Pkld Herring, bx	3 00 @ 3 50	powder & Im-	
Boston Smkl H'g	70 @	perial.	50 @ 60
BRICK, ETC.		Foco-Chow O.	30 @ 35
Lime, Sta Cruz.	2 00 @ 2 25	Japan, 1st quality	40 @ 60
bbl.	2 00 @ 2 25	2d quality.	25 @ 35
Cement, Rosen-			
dale.	2 75 @ 3 50		
Portland.	4 75 @ 5 50		

LEATHER.

[WHOLESALE.]

WEDNESDAY M., July 31, 1878.

Sole Leather, heavy, lh.	22 @ 24
Light.	21 @ 22
Jodot, 8 Kil., doz.	48 @ 50 45
14 to 19 Kil.	65 @ 67 60
Second Choice, 11 to 16 Kil.	80 @ 90 00
Cornellian, 12 to 16 Kil.	50 @ 67 00
Females, 12 to 13 Kil.	63 @ 67 00
14 to 16 Kil.	71 @ 67 00
Simon Ullmo, Females, 12 to 13 Kil.	58 @ 62 50
14 to 15 Kil.	60 @ 62 50
Eastern Calf for Backs, lb.	72 @ 67 00
Simon, 18 Kil.	61 @ 63 00
20 Kil.	65 @ 67 00
24 Kil.	72 @ 67 00
Robert Calf, 7 and 9 Kil.	35 @ 60 00
Kips, French, lh.	1 00 @ 1 35
Cal. doz.	40 @ 60 00
French Sheep, all colors.	8 @ 12 50
Eastern Calf for Backs, lb.	8 @ 1 25
Sheep Roans for Topping, all colors, doz.	9 00 @ 13 00
For Linings.	5 50 @ 10 05
Cal. Russet Sheep Linings.	1 75 @ 4 50
Boot Legs, French Calf, pair.	4 00 @
Good French Calf.	4 00 @ 4 75
Best Jodot Calf.	5 00 @ 5 25
Leather, Harness, lb.	50 @
Pair Bridle, doz.	48 00 @ 72 00
Skirting, lb.	33 @ 37
Welt, doz.	30 00 @ 50 00
Buff, ft.	18 @ 20
Wax Side.	17 @ 18

LUMBER.

WEDNESDAY M., July 31, 1878.

CARGO PRICES OF PUGET SOUND PINE		RETAIL PRICE.	
REDWOOD.		Rough, M.	
Rough, M.	13 00	Rough, M.	18 00
Refuse.	9 00	Fencing.	18 00
Clear.	23 00	Flooring and Step.	28 00
Clear Refuse.	13 00	Narrow.	30 00
Rustic.	23 00	2d quality.	25 00
Refuse.	18 00	Plaths.	3 50
Surfaced.	20 00	Furring, line.	25 00
Refuse.	14 00	REDWOOD.	
Flooring.	20 00	RETAIL PRICE.	
Refuse.	12 00	Rough, M.	18 00
Beaded Flooring.	23 00	Refuse.	14 00
Refuse.	13 00	Pickets, Rough.	15 00
Half-inch Siding.	16 00	Pointed.	16 00
Refuse.	14 00	Rough.	20 00
Half-inch Surfaced.	20 00	Siding.	20 50
Refuse.	14 00	Surfaced & Long Beaded 30	30 00
Half-inch Battens.	16 00	Flooring.	30 00
Pickets, Rough.	11 00	Refuse.	22 50
Rough, Pointed.	12 50	Half-inch Surfaced.	30 00
Fancy, Pointed.	15 00	Rustic, No 1.	30 00
Shingles.	1 75	Battens, lineal ft.	2 00

RETAIL GROCERIES, ETC.

WEDNESDAY, M., July 31, 1878.

Butter, California		Rice.	8 @ 12
Choice, lb.	25 @ 35	Yeast Pwd.	1 50 @ 2 00
Cheese.	18 @ 25	Can'd Oysters doz	20 @ 3 50
Eastern.	25 @ 30	Syrup, S F Gold'n	75 @ 01 02
Lard, Cal.	18 @	Dried Apples, lb.	10 @ 14
Eastern.	20 @ 25	Ger. Prunes.	12 1/2 @ 10
Flour, ex, fam, hb18 00 @ 69		Figs, Cal.	9 @ 15
Corn Meal, lb.	2 1/2 @ 3	Peschies.	11 @ 10
Half-inch Siding.	16 00	Oils, Kan.	50 @ 60
Light Brown.	8 @ 9 1/2	Wines, Old Port.	3 50 @ 05
Suface, Green.	23 @ 35	French Claret.	1 00 @ 2 50
Tea, Fine Black.	50 @ 61 00	Cal, doz hot.	3 00 @ 4 50
Finest Japan.	55 @ 61 00	Whisky, O K, gal.	3 50 @ 05 00
Candles, Adm'te.	15 @ 25	French Brandy.	4 00 @ 08 00
Soap, Cal.	7 @ 10		

LEATHER.

(WHOLESALE.)

WEDNESDAY M., July 31, 1878.

Sole Leather, heavy, lh.	22	00	24
Light, " " " "	20	00	21
Joint, 8 to 10 Kil.	48	00	050 00
11 to 13 Kil.	65	00	076 00
14 to 19 Kil.	80	00	090 00
Second Choice, 11 to 16 Kil.	55	00	070 00
Cornellian, 12 to 16 Kil.	57	00	067 00
Females, 12 to 13 Kil.	63	00	067 00
4 to 16 Kil.	71	00	076 00
Simon, 12 to 13 Kil.	68	00	062 50
14 to 15 Kil.	66	00	070 00
16 to 17 Kil.	72	00	074 00
Simon, 18 Kil.	61	00	063 00
20 Kil.	65	00	067 00
24 Kil.	72	00	074 00
Robert Calf, 7 and 9 Kil.	35	00	060 00
Kid, fresh, lb.	40	00	1 35
Cal. doz.	40	00	1 00
French Sheep, all colors.	8	00	015 00
Eastern Calf for Backs, lh.	9	00	1 25
Sheep Roans for Topping, all colors, doz.	9	00	013 00
For Linings.	5	50	010 50
Cal. Russet Sheep Linings.	7	75	040 50
Boot Lining, French Cal. pair.	4	00	—
Good French Calf.	4	00	04 75
Best Jodot Calf.	5	00	05 25
Leather, Harness, lb.	35	00	35
Fair Bridle, doz.	48	00	072 00
Skinning, lb.	10	00	00
Wet, doz.	30	00	050 00
Buff, ft.	18	00	20
Wax Side.	17	00	—

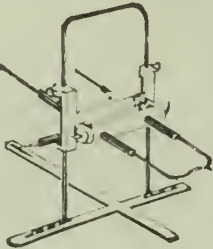
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Hold Your Bags
Save
MONEY!!
FILL
THEM
FULL.
Shake Them Down

HOW? USE THE
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Simple, Cheap,
Adjustable to any
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Completest Device Ever Invented
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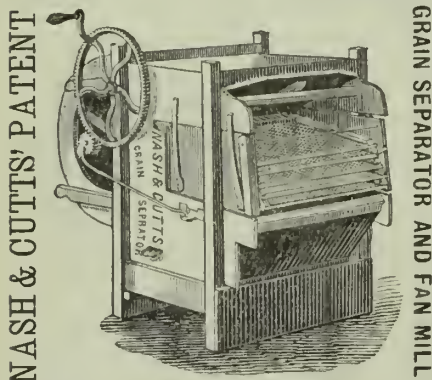
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Pacific Coast,

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THE BEST IS THE CHEAPEST.



THREE SIZES—Warranted to Clean from
60 to 200 bushels per hour, perfectly.

PRICES \$35, \$45 and \$62.

The Nash & Cutts Machine is the only machine that
has taken the First Premium at California State Fairs in
1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877.

Nash & Cutts' Machine will thoroughly separate Must-
ard Seed, Cheat, Barley, Oats, Cracked Wheat, etc., from
Wheat in a rapid and satisfactory manner.

No zinc sieves used in the Nash & Cutts' Grain Separ-
ator and Fan Mill; therefore we can
Clean Faster, Better, and with Less Work
and Trouble.

Than any other machine now in use.

The Nash & Cutts' Machine is the only one that will
clean Alfalfa Seed. All we ask of any one in want of a
Grain Separator is to give the Nash & Cutts' a trial.

EVERY MACHINE FULLY WARRANTED.

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Self Regulating
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These Mills and Pumps are
reliable and always give sat-
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durable in all parts. Solid
wrought iron crank shaft with
double bearings for the crank
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run in lapped boxes.

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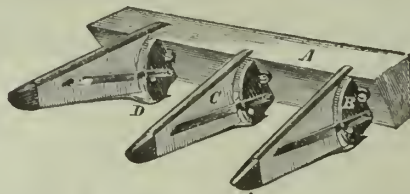
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Took the Premium over all at the great plowing Match
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This Plow is thoroughly made by practical men who
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Sufficient play is given so that the tongue will pass over
crude knolls without changing the working position of the
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Are the best made, combining Strength, Durability,

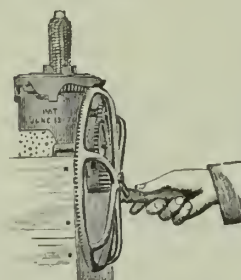
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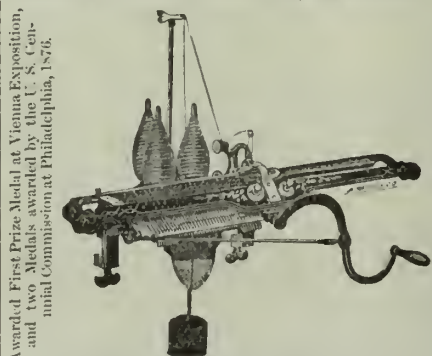


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almost as fast as a \$40
machine, and seven or
eight bushels per hour
is not above its capac-
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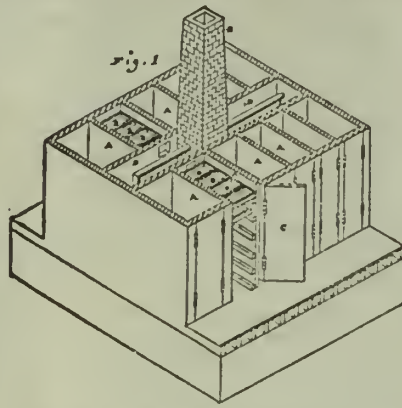
IT IS THE ONLY MACHINE

That knits flat or tubular work of all sizes;
Narrows and widens on hosiery or tubular work;
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Ribbed stitch, the Raised Plain stitch, the Nubia stitch,
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It is now the standard machine for manufacturing, and the
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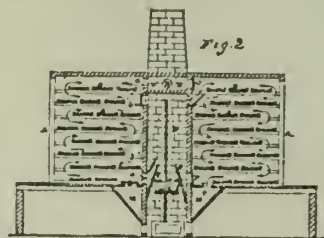
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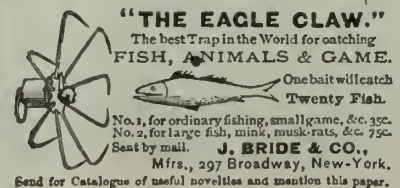
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LEMS, and all OLD SORES, apply freely so as to blister,
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JOINTS, BRUISES, WINDGALLS, and all slight ailments, apply
a small quantity so as not to blister. Saddle Sores, Cuts,
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moderation.

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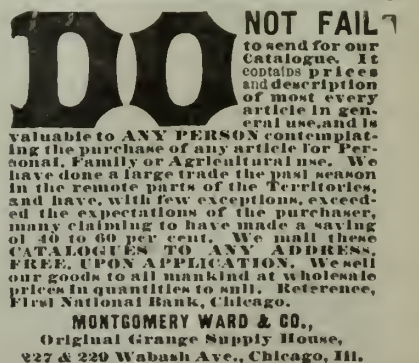
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Of the most approved varieties. Also, Coffee, Cork Oak,
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Yours &c.,
JAMES MC ELROY.

After Two years use.

Dear Sir,
The Burdett Organ sold to me in 1876 has fully
come up to all requirements and proved to be all
that could be desired. You can refer to me if you
choose.
Truly Yours,
H. JACKSON.

Watsonville, June 14th, 1878,

After Seven years use.

PLACERVILLE, June 24th, 1878.
Mr. GRAY: Dear Sir—The Burdett Organ pur-
chased of you in 1871 for durability of construction
and superiority of tone, in my opinion is not sur-
passed by any instrument to my knowledge in use.
Yours,
F. M. DICKERHOFF.

After Eight and Six years use.

OLYMPIA, W. T. June 20, 1878.
Dear Sir—In 1870 I purchased a Burdett Organ
of you, and in 1872 another. They have been in
use ever since and are in good order now.
Respectfully Yours,
J. G. PARKER.

After Seven years use.

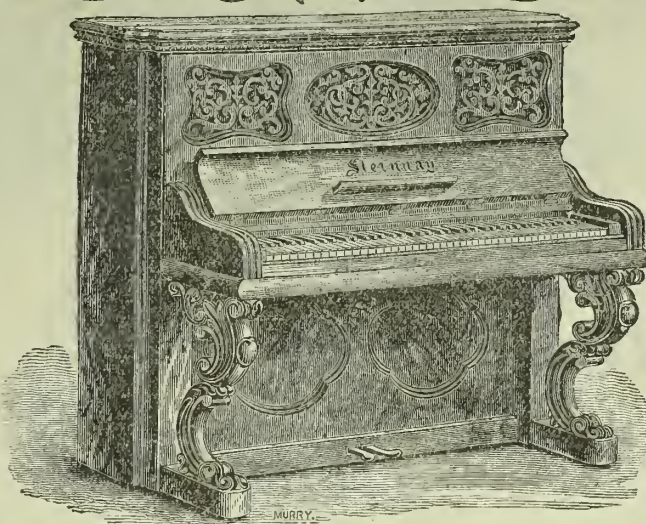
SONORA, June 25, 1878
The Burdett Organ purchased by me in April
1871, has given general satisfaction, and compares
favorably with others of the same capacity, is yet
in good order and cost nothing for repairs since
purchased.
D. SEWELL.

After Three years use.

ST. CATHERINE'S ACADEMY,
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Mr. GRAY: Dear Sir—The Organ purchased
from you has given entire satisfaction, and though
I have used it a great deal it is still an excellent
instrument.
Yours Respectfully,
SISTER EMILY.

STEINWAY STEINWAY

NEW SCALE PIANO NEW SCALE PIANO



Extract from the Official Reports just published in full, by the United States Centennial Commission, and wherein is shown the exact wording of every award to piano makers, proving the previous statements of Steinway & Sons, and showing the fact that many manufacturers have been, and are to-day, guilty of publishing their own perverted concoctions, in place of the reports actually awarded them by the Judges and United States Centennial Commission.

"For greatest concert capacity in Grand Pianos, as also HIGHEST DEGREE OF EXCELLENCE IN ALL THEIR STYLES OF PIANOS, viz.—largest volume, purity and duration of tone, and extraordinary carrying capacity with precision and durability of mechanism; also novel disposition of the strings and construction and bracing of the metal frame."

Improvements applied by STEINWAY & SONS were the following:

I. A DISPOSITION OF THE STRINGS IN THE FORM OF A FAN, placing the bass strings across the steel strings and materially elongating the sound-board bridges by moving them nearer to the center of the sound-board itself, thus setting greater portions of the latter into vibratory action, and so producing a greatly increased volume of sound.

II. A DUPLEX SCALE, patented in 1872, brings into action those portions of the strings which heretofore lay dormant and inactive, thereby increasing the richness, pliability, and singing quality, as well as the carrying capacity of the tone, especially of the upper notes.

III. A CUPOLA METAL FRAME, patented in 1872 and 1875, with its new system of a cross-bar and its bracing, giving absolute safety against the pull of the strings, and increasing the capacity to stand in tune. The space gained by the use of the Capo d'Astro bar permits the use of more heavily felted hammers, whereby a pure, rich, quality of tone is retained much longer than heretofore.

IV. A CONSTRUCTION OF THE SOUND-BOARD, with its system of compression (as shown in the patents of 1866, 1869, and 1872) preventing that relaxation of the sound-board which is the natural result of its constant concussion, caused by the strokes of the hammers against the strings, and by atmospheric influences.

V. A METALLIC TUBULAR FRAME ACTION (patented in 1868 and 1875), being entirely impervious to atmos- pheric influences, in conjunction with the new system of escapement, resulting in unerring precision, power, and delivery of touch, and durability.

VI. A TONE-SUSTAINING PEDAL (patented 1871), extends the capacity of the piano for the production of new musical effects, by enabling the performer at pleasure, to prolong the sound of a single note or group of notes, leaving both hands free to strike other notes; is of simple construction, not liable to get out of order, and its use easily acquired.

Approval of Group Judges:

J. SCHIEDMAYER,
Geo. F. BRISTOW,

JOSEPH HENRY,
E. LEVASSEUR,

J. E. HILGARD,
P. F. KUPKA,

WM. THOMSON,
JAS. C. WATSON,

F. A. P. BARNARD.

Attest:
[Seal.]

J. L. CAMPBELL,
Secretary.

J. R. HAWLEY,
President.

A. T. GOSHORN,
Director-General.

It should be borne in mind, that the six points noted above, are the inventions of STEINWAY & SONS, and peculiarities to be found solely in instruments of their manufacture.

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most as when new: has never been cleaned out,
and yet the tone is equal, if not better than any of
later organs.
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Dear Sir—In reply to your circular note ad-
dressed to me at Arizona City, I beg to inform you
that the Burdett Organ to which you refer was a
very fine instrument, and gave me great satisfac-
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Truly yours,
COL. ROCKWELL.

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CONVENT, TAYLOR & ELLIS STS.
SAN FRANCISCO.
Mr. Gray—The Burdett Organ we purchased
from you in 1870 has given much satisfaction and
is standing well, though for the past year it has
been used very much. I have no objection to your
using my name.
SISTER SUPERIOR.

After Two years use.

SAN BEUNAVENTURA, June 24, 1878
Mr. GRAY—I am happy to say the Burdett
Organ bought from you in July, 1876, has given
perfect satisfaction, and stood the re-shipping of
several hundred miles without the least injury.
You are perfectly welcome to use my name.
F. DELMONT, M. D.

After Eight years use.

SEABECK, W. T. June 24, 1878
The Burdett Organ purchased from you in 1870
has been in constant use, has given, and is now
giving excellent satisfaction.
Yours, &c.,
RICHARD HOLYOKE.

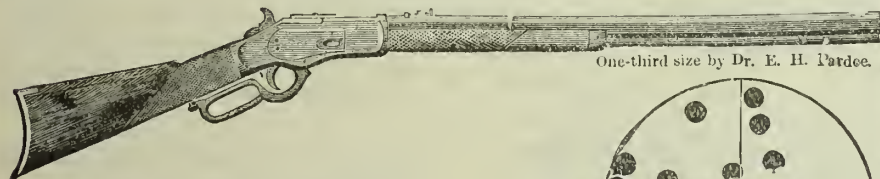
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have given the best kind of satisfaction. We have
never heard of a single complaint, but on the
contrary, always spoken of as the best organ in
the market; and where one party would buy one,
he would always advise his neighbors to purchase
the same kind.
Yours truly,
T. G. LOW & CO.

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satisfaction, and is pronounced one of the best by
competent judges. It has never been cleaned and
there has never been dust except in one reed.
You are at liberty to use my name.
Truly yours,
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MODEL 1873.



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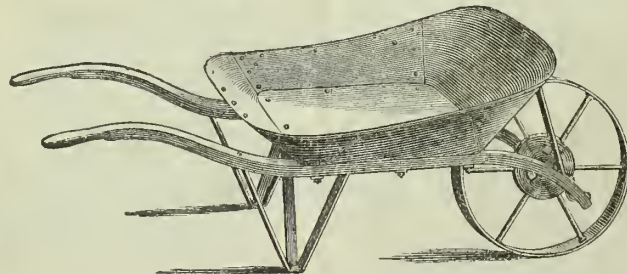
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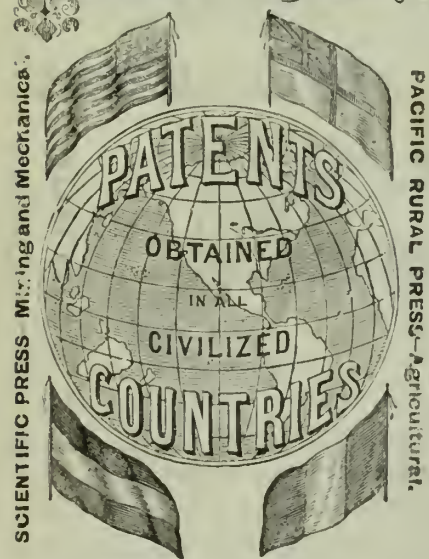
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Volume XVI.]

SAN FRANCISCO, SATURDAY, AUGUST 10, 1878.

Number 6.

The Scotch Collie or Highland Shepherd Dog.

The value of his own trained dogs and the injury occasioned by his neighbors' predatory canines are both almost beyond the shepherd's calculations. The former calls forth his affection and appreciation; the latter, continual apprehension and detestation. It has been often, and perhaps truly, said that the shepherds' yearly loss, throughout the country, by the evil work of worthless curs, far exceeds the whole value of the canine race. There is, however, no chance of the sheep husbandman being called to part with his good dogs to secure the destruction of the evil ones, and the comparison is of little practical value. The best thing he can do is to cultivate the good and reduce the evil by taxing and shooting.

We know of no more gratifying sight in agriculture than the herding of a band of sheep by the skillful shepherd and his well-trained dogs. We could recite many instances within our knowledge and hearing in which the work of these faithful allies of the shepherd displayed such skill, sagacity and faithfulness that it would indeed seem as though intelligence was an attribute of the brute creation. Such a recital would be unnecessary, for the deeds of good dogs are known to all. It is to our present purpose rather to speak particularly of one breed of dogs of pre-eminent fame in the line of sheep-herding.

Our engraving shows a noble specimen of the Scotch collie, imported by Mr. William Crozier, of Northport, New York, and standing at the head of his kennel. His name is "Sport," and his list of premiums shows well the recognition of his excellence. Mr. Crozier is deserving of much credit for his investment of time and capital in the importation and breeding of pure collies. He has now eight bitches in breeding and two stud dogs. He selected his stock personally when in Scotland.

The value of the collies is well known on this coast, and very creditable dogs can be shown by several fanciers. The stock of W. R. & J. Robinson, of Hanford, Tulare county, is of this kind, and there are others whom we do not call to mind at this time.

As with cattle, so with dogs, there are many animals put forth as thoroughbred which are not pure, and many which are far from the accepted standards of excellence. For this reason, in connection with the portrait of Mr. Crozier's fine animal, we propose to present to our readers a detailed description of the marks of purity in collies, drawn chiefly from the writings of Dr. Gordon Staples, an acknowledged British authority.

In his description, Dr. Staples begins with the head, which, after all, is the most important part of any animal. The collie's head is usually described as foxy, but it is more the muzzle than the skull that deserves that title, as you will see by comparing it with the well-stuffed head of a fox. The skulls of the best collies are not flat, neither are they too much raised, but in all there is room for brains. The head is not narrow—not even so narrow as it appears. In criticising a collie, you will often hear the expression made use of, "that dog is too thick in the skull;" but in nine cases out of ten, you will find this is more apparent than real, and that it is shortness of muzzle that gives rise to the seeming fault.

The nose, or rather the muzzle, is fine and somewhat fox-like; the nose itself tapers somewhat, and the point of it is narrow, cold, black and wet. The mouth is small and quite the antithesis to the bull-dog mouth. This would naturally cause you to expect that the teeth would either be level or that the upper jaw should slightly protrude over the under, and either the one state or the other will be found in most well-bred specimens. There is, therefore, no squareness of muzzle, and in the fore-part of the jaw—that is, where the incisors are placed—there is but little breadth. So that, upon the whole, the mouth is small and neat in the true-bred collie. Still, it is but right to add that I have heard Highland shepherds say

they did not like a too small mouth, and that collies so possessed were apt to be biters. The reader must take this for what it is worth.

The eyes of the collie ought not to be too small, and they should be extremely intelligent and bright, and of a dark hazel color. The position of the eye is slightly oblique, but this gives an expression of keenness or sharpness, rather than the crafty, cunning look of his forty-second cousin, the fox.

The ear is somewhat small in the best specimens. It should never hang downwards like that of a dandy, nor forwards like that of the fox-terrier. It is what the Scotch call "worn at half-cock," when the animal is listening—i. e., it would be a prick-ear if it did not fall partially over at the top. It is just the ear to catch the faintest, most distant sound on the hill-side, whether bleat of sheep or the shepherd's whistle.

The chin is clean and finely cut, the lips being thin, and there is neither throatiness nor dewlap.

On the whole the collie's is not a grand head, but it is very elegant, and shaped evidently

hands of a laboring man, though you can't expect to find this firm hard pad on a drawing-room or show-bench dog. The foot should be well knuckled up, should not spread, and be more the round cat-foot than the long hare-foot; but in old age they get longer and spread somewhat.

The ribs ought to be well rounded and the back ones pretty deep; the reverse shows a defect.

The loins should be strong and muscular, both for the sake of speed and staying powers.

Coat.—Tracing the coat backwards from the nose, we first and foremost find the face covered with short, close hair. It is a smooth face, and the ears are also smooth, but as soon as you pass the occipital protuberance and the larynx below, you find that the coat has suddenly elongated. It is massed upon the neck and shoulders, where it is called by fanciers the "mane;" it hangs in quite an apron over the chest, where it is called the "frill." Concerning the texture and quality of the coat it may be remarked that on the breast and on the breech it is somewhat finer in texture than on

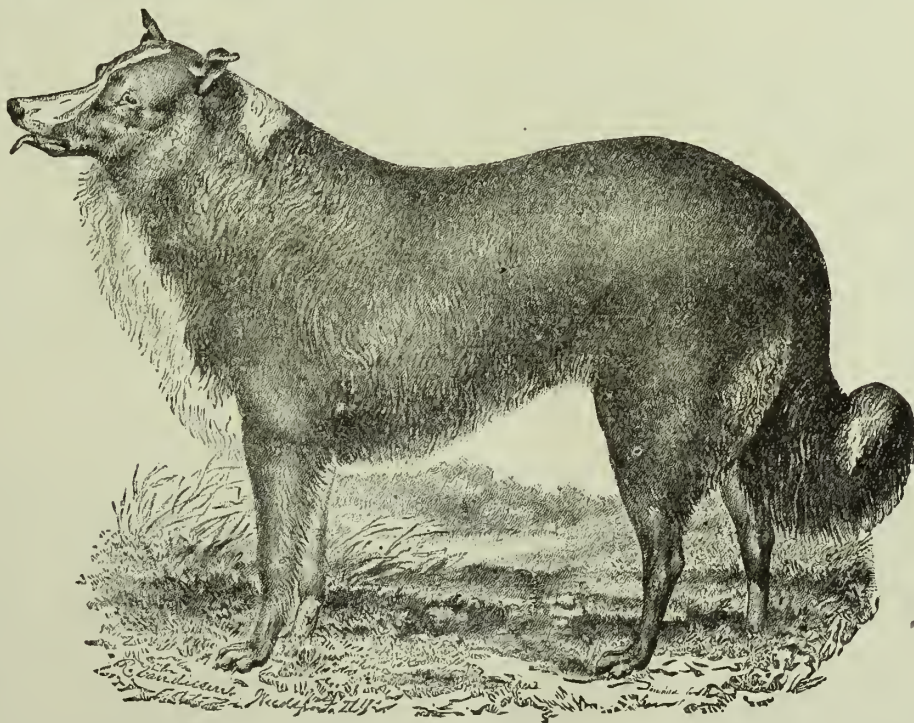
end. When excited, he carries it high above the level of his back.

Concerning the proper size of this breed of dogs, it must be said that experience must be our guide as to the correct size of the animal. The amount of work a shepherd's dog gets through in a day in the mountainous district of Scotland, is quite surprising, and this, too, every day all the year round. What you need in a collie, then, is activity and good staying powers, and the experience of two shepherds goes to prove that you find these two qualities most often combined in the medium-sized collie.

The collie dog, to sum up, is one of the most symmetrically-made dogs we have; his shapely head, his graceful curves, nice, deep chest, and proportionate legs, make him a picture; and if in addition to all this he is happily colored, and has a good coat, he is a picture that once seen is not soon forgotten.

Concerning the price for pure bred collies in Great Britain, Dr. Staples says: "As of late years collies' good qualities have become better known, and his beauty appreciated, so has his price gone up in the market. You can hardly expect a puppy of any consequence, certainly not a good pedigree one, for less than £5, and for grown dogs £10 to £15 is often asked and received. I have known 30 guineas given for a crack bitch, and £50 for a dog, and these prices, large though they may seem, would hardly be sufficient to lure some of our redoubtable champions from off the show-benches."

Dr. Staples also mentions the "short-coated collie." This dog should, in all points, with the exception of course, of coat, come as close to the true Highland collie as possible. They have, however, seldom got such nicely-pricked ears, nor so small a mouth. The coat should be as thick and close as possible. In color they may be black-and-tan, but the black and grey mottle is a great favorite. These animals are common in the lowlands of Scotland, in the north of England, and in Wales. They are greatly prized, and never fail to do their work well.



IMPORTED COLLIE DOG "SPORT," OWNED BY WM. CROZIER, NORTHPORT, N. Y.

more for speed than strength.

On first glancing at a well-bred specimen in full feather, one would be apt to fancy that the head was disproportionately small compared to the bulk of the body.

The following are the average measurements of head compared to height in the Highland collie: Height at shoulders, 22½ inches; length of head, 9½ inches; girth of head below the ear, 14 inches; girth of nose below the eyes, 8 inches.

In measuring the length of the head, you carry the tape from the occiput to the very tip of the nose.

The neck is longer than it seems and is beautifully arched.

The shoulders slope well backwards, as in all animals prized for speed; they should also be strong and plentifully clad in muscle.

The chest ought to be deep rather than wide, giving plenty of lung-room, without in any way interfering with his powers of swift locomotion.

The forearm ought to be sturdy and strong, and the elbow well let down; the pasterns tendinous, hard and long; the whole leg perfectly straight.

The stiles should be moderately well bent, the hock low, the thighs well clad in muscle, without which a collie is of little use for hill work.

We come now to the foot, and this is a very important point; first, the soles must be beautifully padded, and work soon makes the cuticle of the pad strong and horny, as it does the

back, for on these portions of collies' anatomy it is a protection from cold more than anything else that is needed; but on the neck, shoulders, back and loins, the long outer hair is as hard as needles. A distinction is made of the outer hair, because if this be separated a warm woolly undergrowth may be found. All along the back and loins down to the root of the tail the coat is long and abundant, and like that of the Newfoundland, it parts in the center. The tail itself is plentifully feathered, being in fact a bushy tail. The breech is well protected. The fore-legs, covered with smooth hair in front, are moderately feathered behind, but the feather on the hind-legs ends at the hock—all below that is smooth.

Color.—Black-and-tan, and black-and-tan with a bit of white, are the most favorite colors. The tan, be it remembered, must not be that rich, deep tan, which we love to see on the Gordon setter, but a lightish-red tan. The white is generally on the fore-legs or feet and hind-feet, on the chest, and round the neck, with or without a blaze up the face. There are collies of many other colors, as for instance the old-fashioned, iron-grey collie, good specimens of which are still to be met with, in the highland or upland districts of Aberdeenshire.

The carriage of the tail is in some measure characteristic of the breed. The well-bred collie carries his tail, while standing at ease, hanging downwards and sweeping backwards very gracefully indeed, with a curl quite at the

A SOUTH AUSTRALIAN COMBINED REAPER AND THRESHER.—Recently we gave an account of a California machine of this kind. In reports of the Paris exposition we read as follows: "James Garden Ramsay, M. P., of South Australia, exhibits a working model of a Ridley's reaping machine with improvements. This machine reaps and thrashes simultaneously. The power is traction, and during its progress through a field of ripe wheat, oats, or barley, strips the ears and so far thrashes the corn that it only requires to be winnowed before being ready for bagging. Thousands of these reapers are in use in South Australia; this machine, with one man and three horses, reaps and thrashes ordinarily 10 acres a day." It appears that this machine only works one-quarter as fast as the California Centennial Harvester, and, we would infer, it has no fanning mill attached, or else they clean grain very thoroughly by double fanning in South Australia.

THE SOUTHERN CALIFORNIA HORTICULTURAL SOCIETY'S FAIR.—We have received from L. M. Holt, Secretary, a photograph of the elevation of the new pavilion, which will be erected in Los Angeles in season for this year's fair. The photograph shows that the building will be an ornament to the city, and worthy of the horticultural interest which subscribes liberally to erect it. We have already given, in our "Agricultural Notes," the dimensions of the proposed building, and facts about its arrangements. We hope the pavilion will rise speedily, and that this year's fair will be a splendid success. The enterprise is being pushed energetically, and will succeed.

A FAIR AT THE NORTH.—We read in a northern exchange that the Plumas, Lassen and Modoc District Fair will commence at Susanville, Lassen County, on October 21st, and continue five days. This will be the first meeting of the Society, and the programme will include racing and agricultural exhibitions.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Results of Systematic Irrigation.

What is Done on Eleven Acres.

EDITORS PRESS:—Enough of the grain has now been threshed in this irrigated district of Tulare county, to indicate the average yield, and the number of tons that will be shipped this season from its three stations—Cross Creek on the main line of the Central Pacific railroad, near King's river; Hanford, the general center and largest shipping point on the branch road, 14 miles west of Goshen; and Lemoore, eight miles farther west on same branch road. One steam-thresher finished 640 acres of good wheat to-day and threshed from its stacks in all 16,000 bushels, an average of 25 bushels per acre. Another has averaged from 20 to 42 bushels per acre on various ranches, and a third threshed an average of 35 bushels per acre from 140 acres, and between 39 and 40 bushels an acre from 60 acres. Barley is yielding from 30 to 60 bushels per acre. At two frame warehouses in the unpretending little railroad town of Hanford, during the past week, between 60 and 75 wagon-loads of wheat arrive daily, delivering some days as many as 3,000 sacks of wheat, averaging from 130 to 150 pounds per sack. Though some five or six separators are now sacking in this neighborhood from 800 to 1,800 bushels of grain per day, threshing will hardly be finished here before the 1st of October.

What clearer and more practical proofs can be given, than these accurate figures, of the general success of irrigation in a region which a few years ago was pronounced unfit for anything but the wild stock-raising of former days, and even precarious for that?

The figures above given make it likely that from over 30,000 acres of small grain near these stations, the yield will be not far from 30,000 tons, or 600,000 cents, or about 960,000 bushels.

But in considering effects of irrigation, let us turn from these general results to what can be done, or rather

What has been Done on a Small Tract.

The following facts carefully reported or seen, and recorded, go far to answer the question, "Can a moderate sized family be supported on 20 acres of good soil in California thoroughly irrigated and cultivated?"

Dr. Bradley, a constant reader of the RURAL, near Grangeville, has a tract of 11 acres of gray sandy loam of good quality fenced and cross-fenced. Much of his time is devoted to his professional duties, yet almost entirely by his own work he keeps these 11 acres in a thorough state of cultivation, and furnishes a family of four grown people with many of the necessities and luxuries of life. Eight acres of it is in alfalfa, divided by a cross-fence into two four-acre lots. One of these lots is used as a meadow and mown regularly for hay from four to six times a year, yielding between one and two tons per acre by each cutting. On the other lot, as a pasture, he keeps constantly this summer 5 horses, 4 cows, 2 two-year-olds and 3 calves, 8 hogs and 5 sheep. They are in the best condition, and the alfalfa, though grazed on continuously, is several inches high and forms a rich green sward. To prevent the evil effects sometimes caused by constant feeding on green alfalfa, he always keeps a box of salt where they can take it as they want. He finds this a very satisfactory remedy.

On the Remaining Three Acres

He has his buildings, an orchard of mixed fruits comprising choice early and late varieties, a vegetable and flower garden, a patch of the finest corn, a strawberry and blackberry patch, pumpkin, watermelon and muskmelon vines growing most rankly, choice varieties of grapevines well loaded with the richest clusters, and, last but not least, a most flourishing patch of pea-nuts. A thrifty grafted orange tree from Los Angeles had over 200 blossoms on it this spring.

His corn is over 12 feet high with several ears to the stalk, the lower ear being actually so high up that a medium sized man cannot reach it with his hand. His strawberries, of which he finds Wilson's Albany seedling the best bearer here, afforded an abundance of fruit for six weeks this spring and are still bearing. He has already picked over 200 pounds from his vigorously growing blackberry vines, and is still getting masses of the most luscious berries from them. The growth of some of his fruit trees is almost marvelous.

His small trenches, flumes, levees and water-gates are arranged with such simplicity and system that, within a few hours, the whole tract can be well irrigated, and the water can be shut off as readily.

These 11 acres really form an interesting and instructive study. The doctor has been cultivating this place but little more than two years, and made all the improvements himself. Here is an accurate record of what his alfalfa did last year—one of the driest and most ruinous California has had since '49.

Two Acres of Alfalfa.

In its second year, kept in good order for five

months last summer and fall, four horses, three cows, three yearlings and 20 hogs. From four other acres of it in its first season, he cut, last year, in four cuttings, up to the end of October, an average of five tons per cutting, or 20 tons of excellent hay during the year.

From these facts it is seen how good are the chances to support a moderate sized family on 20 acres of such land. With 40 acres so cultivated, a family could not only live in greatest comfort, but might easily "lay by" something every year.

Such results are extremely important, because they afford us so clear a solution of one of the most pressing problems of our times. They show us how the surplus population of our towns and cities, by locating in colonies on good lands, at moderate prices and permanently supplied with enough water for irrigation, can, with proper industry and economy, enjoy a thrift and comfort long unknown to them.

Thus is systematic irrigation gradually teaching us lessons, which, if heeded, can eventually rectify the disturbed relations of capital and labor.

J. W. A. W.

Tulare Co., July 27th, 1878.

Cinchona Seeds or Plants.

EDITORS PRESS:—Having formed the intention to leave for Northern South America, I should be glad to make myself useful to those desiring seeds or plants from there. There can be, perhaps, no more desirable acquisition than the introduction and culture of the cinchona tree in this region. The value and practicability of this culture are acknowledged beyond doubt; what seems to be wanting is the trial. With this view I have the honor to offer my services for collecting seed or living plants in their native country.

Baron von Mueller, in Melbourne, in his "Select Plants" (1876, pages 51-52), highly encourages such a trial, basing his statements on the fact that thousands of cinchonas were grown in the botanic gardens of his place, enduring there Australian heat and cold, ranging from 100° down to 30°. The two best kinds unquestionably are *C. succirubra* and *C. pitayensis*; the former for a more hot and damp climate, the latter for cool and drier ones. Both are very durable species and the quickest growers of the genus.

Mr. Cross, in his report on the *Pitaya cinchona*, relates that this species ascends the mountain Pitayo to a height where potatoes and barley cease. Besides, the *pitaya* surpasses by far the most valuable of all. It is this particular cinchona, which in upper India yielded, in some instances, the unprecedented quantity of 11% alkaloids, nearly 6% quinine, the rest quinidin and cinchonin (Baron von Mueller, Select Plants, 51). With the fourth or fifth year barking begins, even in the common species. I myself had the advantage to notice the good condition of the cinchonas at the extensive plantations at Haegala, on Ceylon, and saw the specimens of the Botanic Gardens of Australia.

Any order given will meet with my full care and due acknowledgment as support to the naturalist. I believe also it cannot fail, after all, to earn its due success and reward.

FRANK ETEL.

San Francisco, August 2d.

[Prof. Eitel is recommended to us as a trustworthy man and naturalist, and if any of our readers desire to make a trial of cinchona it may be well for them to correspond with him. Our only office in the matter is to give him the benefit of his statement. Those who may be interested may learn from him of his undertaking.—EDITORS PRESS.]

The Wheat and Cheat Experiments.

EDITORS PRESS:—I desire to say as an addendum to the correspondence between Mr. Lathrop and myself, published last week, that on the occasion of a visit which that gentleman paid me a few days ago, it turned out that what he meant by cheat in his communication, was not at all the article understood by all California farmers, viz: The bearded or poison darnel, *Lolium temulentum*; but the true chess-cheat, Willard's Bromus, etc., of the Atlantic States, to wit, *Bromus secalinus*.

Let this be added to the chapter of confusion arising from the careless and inaccurate use of "common names," which thus have become no names at all; witness the interesting statement of the *Mark Lane Express*, according to which the designation of "cheat" is applied in England to a fungus disease akin to the ergot of rye, which "cheats" the farmer out of the wheat he has sown. Like rust and smut, it may affect other cereals besides wheat, and even forage grasses. But such "transformations" as these can afford no more countenance to the wheat-cheat theorists, that might be derived from the effects of small-pox or rheumatism on the human subject; "a man's a man for a' that," and so will wheat be wheat, and not a different kind of grass, even though it be smutted, ergotized, or emasculated.

E. W. HILGARD.

University of California, August 3d, 1878.

A Native Textile Plant in Merced County.

EDITORS PRESS:—I send you herewith a sample of the fiber, dead stalk and green leaf, of a textile plant which I find growing on the bottom lands of the Merced river, in the vicinity of Suelling. The plant is here known as *shoe-string*—the name no doubt being suggested by the stringy and ragged appearance of the dead stalks after being exposed to the winter storms. This sample of fiber was stripped from the decaying canes of last year's growth, and is perhaps not seen under the most favorable conditions to afford a correct estimate of its value; nevertheless, I believe that its great strength, even in its present condition, and the large yield of the plant, are qualities which render it worthy of investigation.

The plant is perennial. It grows luxuriantly on all the good corn lands along the river, and by all corn cultivators is voted an intolerable nuisance, as its strong roots have to be grubbed out of the way of the plow. It is not uncommon to see from 50 to 100 ratoons from a single root; and they seem to go on increasing from year to year. I believe that it would only be necessary to plant it once, and then the chief employment would be to keep it from becoming too dense a growth. The canes, or ratoons, grow from six to nine feet high, and would evidently produce an immense quantity of fiber per acre.

I have said that it grows on all good corn lands. It is not, however, to be found there only, as I find it on the driest and most gravelly places on the river bottom lands, and I believe it will grow on any deep soil that will produce wheat or barley. Its mode of propagation is plainly suggested to everyone who has had to grub it out of the corn-field, as every piece of root that is left on the ground becomes a new plant, and in a few years, if not removed, an ever increasing thicket of canes.

If the fiber of this plant is found to be well adapted to the manufacture of the coarser qualities of sacks and cordage, a question of vital interest to the prosperity of the State would seem to be easily solved by its cultivation.

J. R. HORSLEY.

Snelling, Cal.

[The plant, as nearly as we could determine from the leaf, is probably *Psoralea macrostachya*. The fiber seems good and strong, but no better than that yielded by many other plants. There is little opportunity of turning it to account, because other material is so cheap. For paper making, for example, nothing is better than old manila rope, and this, the paper makers inform us, can be had for \$20 a ton in as large quantities as they can use. The fiber which our correspondent sends could not be cleaned and prepared for nearly so cheap a price. There is no trouble in producing raw textile material; the difficulty lies in getting the expensive machinery which is needed to manufacture it and then produce enough of the finished article to make the investment of capital profitable, this is the problem to be solved.—EDS. PRESS.]

A Lazy Man's Paradise.

EDITORS PRESS:—The natural fertility of our soil, with very little aid, produces abundant crops. Some people think they see signs of its exhaustion. But there are always men of bilious temperament; never pleased with their condition. They argue that it requires the help of manure, rest, rotation and summer fallow, and that therein lies our sin of omission. They would transplant to this garden of the Hesperides the old-fashioned habits of New England, where the rocky soil is so sterile it requires guano, gypsum and barn-yard manure to make a slender crop; and when the farmer must devote one-half the year to untiring labor, if he would grow enough to live upon the other half.

The absurdity of this doctrine is apparent. In the first place nature designed the western shore of the continent as an asylum for men of leisure and Acadian simplicity. Anybody with half an eye can see that these wide-spread plains, covered with wild oats and grasses, were planned for roving herds and tribes of nomads. The Greasers, who were disposed of by us, were the unpoetic parallel to the Tartars of the steppes of Asia. Their adobe houses, a day's ride apart, were punctuation points in the grand pastoral of the new El Dorado. The discovery of gold was very nearly its ruin. It brought a worse invasion than the Goth—a living stream of Pikes and Yankees, who, worst of all, made up their minds to stay.

Everybody will testify that when barn-yard manure is spread on the land and plowed in, it burns up the crop. So well is this question settled that, in traveling the country over, one may see the piles rotting uncared for against the sides of barns, or washed into neighboring streams. This seems to be the favorite mode of getting rid of it. The burning of straw piles is a speedy and effective plan also.

No other land, like this, re-seeds itself for another harvest. To the least reflecting, the bountiful provision of nature is apparent in giv-

ing us volunteer crops without labor. No other land has grass knee-high in winter time, to relieve its population from the drudgery of laying up fodder. It is strange, therefore, that many believe these benignant arrangements were especially designed for good Californians, and that they are released from the curse pronounced upon mankind (of less favored climates), that "by the sweat of thy brow," etc. The logical sequence is plain to the meanest understanding. We enjoy more polite leisure in which to discuss philosophy and politics; to tinker with making new Constitutions and indulge in dangerous experiments with communism, not forgetting, by the way, the most ingenious plans for raising high taxes, and improved methods of spending them, than the people of any other State in this glorious Union.

If the writer has not demonstrated to the satisfaction of all concerned that this is the lazy man's paradise, he will further illustrate by relating an agricultural incident in his own experience.

All the world knows about the wet weather of the last rainy season and how impossible it was to plow at any time during those months, which, we conclude, was only a plain hint of the elements to leave the soil unworked. Our strawberry bed was heavily mulched with rotten stable manure, when laid by last fall, to smother out the weeds, as being more easily done than continued cultivation. The unprecedented rains brought on the weeds, nevertheless, and they soon hid the vines. For several months no one could venture on the ground to pull them. The grass was a solid mat between the hills and weeds were waist-high in the spring. The tallest were pulled up, but the fork could not be used at all. So we concluded to let the bed "go to grass," and it went. At the proper season, out of respect for appearances, other parts of the ground nearest the road were cultivated as usual, while the strawberries were hid in grass and fennel. By and by they blossomed and irrigation was suggested to secure a few berries. This was done. The heavy growth of weeds protected them from the sun and the wind, and we were rewarded, in due time, with a crop of large and luscious fruit. More buds and berries formed. The showering was kept up, the yield of berries kept pace with the watering, and, to the present date, the product of the patch eclipses far the yield of any former year.

Newton discovered the laws of gravitation by an accident. This experiment would also entitle the writer to rank as a discoverer. His modesty forbids the claim. There are doubtless many others to contest it. Its settlement might be as interminable as the chess question between Prof. Hilgard and his ultra-Darwinian opponents.

J. B. A.

Santa Rosa, Cal., July 29th, 1878.

ARBORICULTURE.

Forestry.—The Value of Catalpa.

EDITORS PRESS:—The testimony is cumulative, and comes from every quarter, as to the urgency that exists for the planting of forests in the United States to repair the waste occasioned by reckless destruction, so as to provide timber for the inevitable wants of the future. Congress has appointed a commission, of which F. B. Hough, of Lowell, New York, is Chairman, to report on the whole subject of forests and forestry, timber demand and supply, and its relations to the industries of the Nation. This is only following in the steps of older governments, where this important subject has been assiduously studied for generations. But the genius of Americans does not lead them to depend on governmental promptings and leadership, they being competent to project and carry out in their personal or co-operative capacity enterprises of the greatest moment.

Thus we have already many examples of individuals engaged in extensive tree planting, notable among which is that of the Messrs Landreth (the seedsmen of cosmopolitan fame), of Bristol, Pennsylvania, who already have 5,000 acres on the Rappahannock appropriated to this industry. Scores of Californians have devoted large areas to the growth of the eucalyptus. The transcontinental railways have also given attention to this subject, some of them appointing foresters and promoting sylviculture along their lines.

The veteran car-builder, Mr. E. E. Barney, of Dayton, Ohio, has done a good service to the country by collecting and publishing facts as to the great value of the catalpa tree (*C. Bignonoides*) and the importance of its extensive cultivation in groves.

Some of the facts he presents are truly startling. Thus, he says: "There cannot be less than 200,000,000 ties in the various railroads in the United States. At 200 ties per acre, it has required 1,000,000 acres of well-timbered land to furnish them. As the average life of ties is hardly more than five years, it requires 200,000 acres of land each year to keep up the supply. Three times that amount is required each year to furnish the lumber used in bridges and rolling stock. So that the lumber on 1,000,000 acres of land is required every year to supply the wants of our railroads for all purposes."

"Samples of catalpa, taken at random, indi-

cate that this wood will bear the pressure to which it is subjected when used as railroad ties. Two catalpa railroad ties have been in use near our office over four years, and 12 others for the last five months. All hold their spikes well and show no indication of mashing more than the oak on each side of them, and over both of which heavily-loaded trains pass almost hourly.

"A catalpa gate-post was cut for fire wood and found in fair condition after doing service for nearly a century. Col. Cockrum has known it in use, without stain or decay, for fifty years."

The rapidity of the growth of catalpa in youth is astonishing, and it seems to grow equally well in any soil. It will grow from Iowa in the north to Florida in the south. The propagation is very simple: by scattering the seed on land either recently cleared or only partially so; or by raising the plants in a seed bed and setting them out. Catalpa also takes a fine polish and is an admirable ornamental cabinet wood. It is quite time that farmers should be wise enough to plant trees, not only enough for their own needs and that of their less provident neighbors, but also to supply the wants of our numerous railroads.

As one method of promoting timber culture, I suggest the formation of

Forest Corporations.

As it requires more than the average life of a man, beginning, say, at 25 years old, to harvest a timber crop from his own planting of seed, it would seem best for this work to be done by forest corporations. In every neighborhood, men could readily select areas suitable for planting groves and obtain them at minimum prices. They could also procure labor from the members of the corporation, at the lowest rates, to attend to the culture of the trees. Another advantage of having such an enterprise carried on by distant capitalists would be that the sympathies and interests of the vicinity would be concentrated upon it, which would not be so likely to be the case if it was undertaken by foreign or absentee parties, who, also, would have to pay, perhaps, double prices for the necessary labor, while nine-tenths of their money would be distributed in the vicinity of the forest. The instances of farming operations being successfully conducted by corporations or even by absentee landlords are very rare, but the conditions of arboriculture are somewhat different and the disadvantages of corporate management are by this plan reduced to a minimum. This plan is based on the gain to be derived from the aggregation of small savings, which has been so conspicuously illustrated by our Philadelphia building associations, which have, in fact, proved to be the most successful application of the principle of co-operation.

City mechanics have spare money, but about the only spare commodity that farmers have is time. If they could invest a fraction of each year in the stock of a forest corporation, it would grow into money in due course. The legislature should provide cheap processes for the legal organization of such associations, and the idea becoming sporadic, we should see it, all over the State, in suitable localities, take root and thrive.

In some places fence timber would pay the best dividend; in others railroad ties could be grown to a profit; whilst in others the more valuable kinds, such as ornamental woods, like black walnut, would be the only kinds that would pay. A "State forester," whose services could be had at, say, \$2 per day and expenses, could give valuable advice in the selection of grounds as to aspect, soil, etc., the proper kinds and methods of planting and culture, and, ultimately, as to marketing. In Europe, the initiative to industrial movements is often given by the government by the establishment of schools, etc., but in this country the people are competent to the initiative in every enterprise of pith and moment, and these neighborhood forests would constitute in themselves objective schools, awakening and producing a liberal interest. The Forest Boards would come to be no mere wooden figure heads, but fully equal to every tough, knotty subject, and their discussions and processes would awaken a great deal of attention to this very important subject.

The farmer, from his isolation, has heretofore been denied participation in co-operative movements. He is fast learning the advantages to be gained from combined and concerted action. Such forest corporations, as are here suggested, would prove additional centers of usefulness and incentives to self-helpfulness. There would be no reason for citizens to fear to supplement the capital of the farmers, provided the latter contributed at least 50% of the capital at the start; indeed such investments would probably constitute the very safest and best that could be made.

HORACE J. SMITH.

George's Hill, Philadelphia.

FRENCH FOREST PLANTING.—The *Revue des Eaux et Forêts* gives a resume of statistics derived from official sources, showing that in 1875 various communes in France replanted as forest rather more than 814 hectares of land. Towards this work the State contributed 29,054 francs in money, and seeds of plants to the value of 27,328 francs. In the same year 347 hectares were replanted by private owners, with the assistance of a government contribution of 13,705 francs. The works of the same nature undertaken by the State itself in various mountainous districts of the country were

on a far larger scale. At the end of the year 128,269 hectares had been taken in hand, of which 29,490 were completely stocked. The trees required for this purpose are supplied by specially established nurseries, covering altogether an area of 82 hectares, which yielded in the 12 month no less than 19,117,000 plants. It may be in the recollection of our readers that the department of woods and forests, which formerly was attached to the Ministry of Finance, was incorporated last December in the Ministry of Agriculture and Commerce.

THE APIARY.

Where to Locate an Apiary.—No. 1.

EDITORS PRESS.—The first great point in going into the bee business is the location of the apiary. There are several points that should be considered. Perhaps we should say water comes first, because it is something we cannot get along without. There is a great quantity used by the bees on a hot day to keep the combs from melting down, besides what is used in feeding brood in the latter part of the season. When the wind blows from the east, hot and dry, I have known the bees to use a pound a day to the hive, allowing a sufficient quantity for evaporation. A bee's life is governed, we might say, by the work it does, and if it has to fly a long way for water it cannot during its life bring the honey to its owner; it could if the water was handy. Wet sand is the best for bees to suck water from, for none are drowned. It looks to me as if the old bees carry the most water.

I water in troughs, and on closely examining the troughs I find a good many in the evening dead, and others wet and cold. I should judge 90% of those are old and worn out, their wings notched and broken. I have known an apiary of three or four hundred stands to carry from 40 to 60 gallons per day. It is not policy to have it too close, for a bee will circle about so much anyhow when he comes and goes; one or two hundred yards I think is about right.

Again, a small trough of salt and water in the light of the breeding season is always covered with bees. In some locations there are natural salt springs on which the bees work the whole season.

Pasturage.

The next thing to look for is the natural pasturage for the bee. There are so many good honey plants and shrubs in California, I don't know where to begin. Perhaps it would be best to take them in order as they come in in spring. About the first thing is the willow, that is in the best honey belt of California, which is several miles wide and extends from San Luis to San Diego. There are two kinds of willow, called here "black" and "soft" willow. It blossoms according to location, some early and some late. When it begins to bloom the bees work very hard, carrying pollen and thin honey to feed. Their brood increases very rapidly on this feed, which lasts until the alfalfa begins to bloom. Willow honey is a light amber and very thin. Not much accumulates in the hive, but most of it is fed to brood.

The alfalfa is a good honey plant. The honey being rather dark and very heavy, will granulate in 10 or 20 days if left exposed to the air, but if sealed up will keep its liquid form much longer. The bees gather this so fast some years it is necessary to extract the combs from the brood nest, to give the queen room to lay, and to prevent swarming too soon or having a small swarm; for a large swarm increases in bees faster than if divided.

HYBRID.

Ventura County, Cal.

[To be Continued.]

THE VINEYARD.

A Wine Exhibit at the Mechanics' Fair.

J. H. Culver, Secretary, has issued the following circular to wine producers, concerning an exhibit of native wines at the Mechanics' Institute fair, which will open August 13th:

After mature consideration by the Board of Managers, it has been decided to invite wine growers and merchants to co-operate with them in rendering the exhibition of pure native California wine at the forthcoming fair as worthy of the occasion as possible; and also for the purpose of having them submitted to experts, *not for competition*, as between individual growers or merchants, but mainly with a view to obtain a report on their respective characters and general vinous properties.

The jury will be composed of gentlemen who have no personal or pecuniary interest, but only a scientific one, in wines. A gentleman from Australia, the Rev. Dr. Bleasdale, who is residing here for a time, who, it is well known, has done much to foster and advance the vineyard industry in Australia, and whose critical judgment upon pure wines has long been recognized and highly esteemed, both in Australia and England, has agreed to take part in the present exposition, and also to favor the Managers with a report upon the samples submitted. The Managers consider that such an independent report by a distinguished savant would benefit the wine industry both in this country and abroad, by giving reliable information on the extent, variety and goodness of the

results obtained hitherto in this branch of California agriculture.

It will be sufficient to send three bottles of each kind to lay before the judges; but it would be well to send also some empty labeled bottles to place on shelves in the hall. The wine should be sent with the least possible delay, that it may have time to rest and recover condition. Young wines are specially requested.

I am to request vineyard proprietors residing at a distance, who may have agents in San Francisco, but who may not care to send samples, to authorize me to obtain from them the samples of wines which they consider most interesting and characteristic of their district, or of their methods of treating and maturing them. A blank form will be sent to each exhibitor, upon which he is to give some facts concerning his manner of growing the grapes, etc., and the kinds of grapes used to make the samples of wine shown. A full and complete report will be prepared, published and sent to each exhibitor. All packages to be marked "Wine Exhibit," 13th Industrial Exhibition, San Francisco, Cal., and the charges prepaid.

POULTRY YARD.

Breeding Good Sitters and Mothers.

A poultry breeder writes an article for the *Country Gentleman*, giving his views on breeding several kinds of fowls which are in hand in this State. His conclusions will be interesting to our breeders. He sets out with the proposition that in the rearing of chicks it is one important item to secure good sitters, that afterwards make kind mothers. A good sitter does not always make a kind mother, but a good mother is almost invariably a good sitter. Often a hen may be a good sitter and yet become a poor and indifferent mother. Good mothers are necessary, especially for small breeds. In the first place hens with some size are requisite, as they possess the desired degree of animal heat necessary to impart strength to the tender brood. To gain this we must introduce a portion of Asiatic blood in our sitters. The Brahma should be preferred before the Cochin. Some two years ago the writer had need of sitters for Brown Leghorn eggs, and was under the necessity of procuring them from the neighbors. They were what are called Light Brahmas, but with no purity of breeding. Out of four obtained there was but one really good one, and that one was rather undersized for the breed, with a square, low-hung body, and short legs. A hen with short legs should always be chosen as a sitter; with an ample body and quiet, mild habits. Too much leginess in a hen results in restlessness and uneasiness, neither can she manage sitting to advantage. She often breaks her eggs.

Leghorn chicks are like turkeys. They require warm weather. Turkeys will endure almost any amount of heat, providing it does not reach the boiling point, and thrive. The finest Spanish chicks I ever raised were hatched under a turkey-hen. She is the very best of sitters and the kindest and most indulgent mother known in the poultry yard. In the first place, she is a steady and persistent sitter, seldom leaving the nest oftener than once in three days, and then only in the warmest portion of the day, except in extreme warm weather when she will come off every other day, and then, when not disturbed, in the forenoon if the weather be clear and pleasant. She seldom leaves the nest in stormy weather. The small European breeds, which include the Spanish class, under which general head the Leghorns are classified, also the Games and Dominiques, are similar in growth and feathering to the turkey. Their wings, primaries and secondaries appear first, and they are ready for short flights when the Brahmas cannot raise their bulky forms from the ground, and are waddling around like a duck, with scant gosling down covering their nakedness—a mode state which increases every day as the bird gains size during the first four weeks. Yet, for all this, they are remarkable hardy chicks, enduring hardships that would tell severely on their better clad brethren.

At the age of one week, the wings of a Leghorn chick are full of the first quill feathers, and clumps begin to appear on the wing bows, which at two weeks result in the wing coverts. At three weeks the backs are covered, and at the age of seven weeks the young cocks give their first proud, exultant crow. Not only is the feathering rapid, but the bone and muscle keep pace, and for this reason it is that the young and growing birds require good mothers, that will not reduce their strength by much rambling and a constant, restless uneasiness for something a little beyond reach. They require also strong, nourishing food, for the Leghorns do their work in a remarkable small space of time. A cross between a rightly chosen Brahma hen and a Leghorn cock makes the very best sitters, and also good mothers. They possess ample feathering, a large body, and quiet disposition. Hens that are intended for sitters should be kept clean and free from vermin. The presence of vermin on the body injures the web of the feather, and renders the whole lifeless, besides filling the chicks full of parasites as soon as hatched. A Dominique hen makes a good sitter, and generally a careful hatcher, as she is light, but has not warmth of body sufficient for a brood; beside, she is flighty in her habits and uncertain in her movements. Notwithstanding all that has been written

and said in the past, hens of the non-sitting varieties will sometimes sit, and they make good and persistent sitters also, but miserable mothers. They have no general idea of the management of a brood—indeed, not the right systematic instinct, without which chickens cannot be brought up in the way they should go. It is very well for the lame and lazy to allow a hen to have her own head in the rearing of her brood—take her chicks and run with them wherever inclination may direct. The writer often hears it stated that they do much better than those cooped up and fed on extras, but practical experience teaches a far different lesson. One pullet reared by method, and a trained mother, is worth half a dozen of those that get their own living in a hap-hazard manner. In the first place, the bird gains greater size, is always in good condition, gives more eggs, is more quiet and tame, and gentle to the touch of the hand; in short, is more amiable in every way. The Spanish class have a wild, shy nature. They require quiet, gentle mothers to subdue and control their flighty habits.

A CURE FOR EGG-EATING HENS.—Mr. C. S. Black, of Jackson valley, Amador county, a gentleman who has had experience in managing poultry, says the most effectual way of convincing a hen that it is not right to suck eggs is to cut off the point of the upper mandible enough to start the red. The cure is effectual, for with the sore bill she can't break the shell of the egg, and by the time it is grown out she has forgotten her naughtiness.

THE SWINE YARD.

Hog-Boarding for One Cent a Day.

Dr. W. L. Challis, of Kansas, has an article with this somewhat sensational heading in a recent issue of the *N. Y. Weekly Tribune*. We cannot do better than use his words to explain this startling proposition and recommend his method for experiment by those who have the facilities. He writes as follows: The hog is to some extent a grazing animal, and a free run in fields of red clover, such as is common in the East, will supply many of his wants. The great hog-producing districts are not generally favored with this, and reliance is of necessity on prairie grass and corn. The present price of corn is better than that of pork, and the man who attempts to make hogs from pigs by throwing corn in the ear from his cribs will soon need a guardian. It is a sure road to poverty. Indeed, corn and water in the crude state will not make hogs out of pigs—but runts. Corn is inflammatory, and in crude form produces very little growth, each pound of increase produced by it costing three times its value. Better sell your corn and buy your meat. But this is unnecessary, for the same material can be manipulated so as to make pork-raising profitable at two cents a pound. The secret is in feeding essence of corn, and no crude corn. I speak of the treatment of hogs during the growing period, the finish for market being a different process. Get one, three or five sugar hogsheads, according to the size of your herd; remove the inside hoop that holds the bottom, cank well with oakum around the bottom, replace the hoop and bury side by side in the ground three feet or more, near a well or spring where there will be plenty of water, and hinge a lid to each one. If in the hog pasture, fence around, or you will lose hogs by getting an overdose, as our experience will fully verify. Have large troughs, made of two-inch plank, placed contiguous. Grind your corn fine and put in each hogshead four to six bushels and a quart of salt. This may make you sick, but wait. Fill up with water, stir occasionally for two or three days, and when fermentation has fairly set in—say two or three days—begin to feed. It is always ready afterward, for there is yeast in the bottom. Feed and fill up with water at once, always keeping them full; repeating twice each day, until the homeopathic dilution reminds you that further progress in that direction might be cruelty to animals, then throw in a sack of feed and proceed as before. Those who have not tried the plan will be astonished to what attenuation corn can be thus reduced and what results will be wrought.

We have seven hogsheads running in this way, and have demonstrated the fact that a 200 pound porker can be kept growing by this process on a cost of one cent a day. Each hog will drink from two to five gallons at a feed, distend, lay down, grunt and grow. For the young pigs a trough should be shut off from the herd, and their food made richer. They need distension as do hogs, and will acquire the habit of assimilating largely. Into these tubs can be thrown the refuse from the kitchen and dairy, thereby increasing the good results. Wheat, rye, barley, millet, broom-corn seed, etc., can be ground and utilized in the same manner. I am aware that slop for hogs is no new thing, and that the farmer of the East uses his bran and shorts in that way, but what we now aim at, is how to convert the corn and surplus grain of the farm into pork with the greatest profit, applicable alike to a small or large business. The reader will understand that where hogs have no range or grass, the slop must be fed three times a day, and be of increased strength. In districts where there are no facilities for grinding, if the corn in the ear or shelled is soaked in water 24 hours before feeding, it will be much improved as a summer food.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Worthy State Lecturer's Appointments.

Name of Grange.	County.	Time.
Crescent City.....	Del Norte.	Wednesday August 14th
Rivellutah.....	Humboldt.	Saturday, August 17th
Sable Bluff.....	Humboldt.	Monday, August 19th
Ferndale.....	Humboldt.	Wednesday, August 22nd
Mattole.....	Humboldt.	Friday, August 23rd
Cahito.....	Mendocino.	Tuesday, August 27th
Potter Valley.....	Mendocino.	Thursday August 29th
Lakeport.....	Lake.	Saturday, August 31st
Cloverdale.....	Sonoma.	Monday, September 2d
Healdsburg.....	Sonoma.	Tuesday, September 3d

The Grange.

All human institutions may be measured by the material of which they are composed, and their qualities learned from the purposes they seek to accomplish.

Let us analyze the Grange and examine it by this standard. It comes from the country fresh with the vigor of independence. It is composed of a self-sustaining class and represents a vital interest. It is composed of agriculturists, and agriculture is the parent of civilization; for upon the success of agriculture, the prosperity of all other occupations depend. Without agriculture, there is no adequate supply of food or raw material for manufactures, and it is the source from which the streams of commerce flow.

Any one familiar with agricultural pursuits knows it to be a constant contest. Nature, in all her moods to be consulted—hidden laws, little understood, to be consulted. Drouth, floods, rust and destructive insects may thwart the best efforts from our lack of knowledge, and where success is attained in crops, the speculator is ready, with sharpened wits, to make a corner on them in the market. The farmer is, by the nature of his occupation, isolated and independent in his actions. He looks to his farm for success, and has struggled alone in an unequal contest, while other occupations have enjoyed the advantages of organization. To have maintained such a contest is abundant evidence of the sterling qualities of the material of which the Grange is composed.

The effect of organized effort is everywhere apparent. Civilization itself is among its fruits. The Grange is the farmers' organized effort to rise.

The meetings of the Grange bring farmers and their families together, and makes them acquainted with each other, creating a fraternal feeling among those who were strangers. It affords the members the opportunity to gain useful information from each other, and stimulates observation and thought for the mutual benefit of all. It affords the opportunity of communicating ideas for a laudable purpose, and thus puts individuals in possession of their faculties. In all matters pertaining to the farm and household, it stimulates improvement. Education is its fundamental principle, and it requires the best. It seeks physical, mental and moral culture. In matters of public policy, the welfare of society is considered free from party and sect. It extends justice to all classes as the basis of its own rights. It aims to enable its members "to make the most of themselves," and by co-operation secure protection from all unjust exactions.

It respects labor for its productive power, and seeks the elevation of the laborer by the inculcation of correct principles. It values property for the comfort and happiness its proper use affords, and demands its protection by just and equitable laws.—*Worthy Master I. C. Steele, in Patron.*

THE COMING MEETING OF THE STATE GRANGE.—The annual meeting of the State Grange will be held in Sacramento city, commencing on Tuesday, October 1st, 1878. The *Patron* says: We learn that our brothers and sisters in Sacramento county are taking active steps towards making the meeting in Sacramento a grand success. They have already appointed committees and sub-committees on various subjects—to the end that everything may pass off pleasantly during the session. Knowing the Sacramentoans as we do, we can safely guarantee to those who attend our next annual meeting, a cordial greeting and a pleasant time at the hands of the Sacramento county Grangers.

BROTHER NELSON.—We are glad to learn that P. M. Bro. A. D. Nelson, of Butte county, is recovering fully from the ill effects of the severe accident which occurred to him last fall. He expects to be able to take an active part in the coming meeting of the State Grange.

A NEW ALKALOID.—According to the *Chemical News*, M. Tenrot has discovered a new alkaloid in the bark of the pomegranate tree. It is volatile and powerfully basic, forming well-defined salts. It precipitates the chlorides of palladium and gold, but not that of platinum. It gives a white precipitate with the salts of lead, mercury, zinc and silver. The new body is named (in honor of M. Pelletier, presumably) pelletierin.

On the 10th of July, Earl Granville, as the Chancellor of the University of London, laid the corner-stone of the new buildings which are to be added to University College at a cost of £100,000.

The Mining Debris Trial.

The case of James H. Keyes against the Little York Gold Washing and Water Company, limited, and others, has been on trial in the District Court of Sutter county, at Yuba City, before Judge Keyser, during the last two weeks. The plaintiff was represented by George Cadwalader, P. Van Clief and J. H. Craddock, and defendants by S. M. Wilson, A. B. Dibble, James K. Byrne and I. S. & W. C. Belcher. The plaintiff is the owner of about 1,000 acres of land on Bear river, about six miles above its junction with the Feather, and the complainant prays for a perpetual injunction to restrain the defendants, who are engaged in hydraulic mining on Bear river and tributaries above plaintiff's land, from discharging debris from their mines into those streams, to the damage of the plaintiff. The complainant does not ask for damages. The suit is against about 20 mining companies. The complainant alleges that during the last three years said miners have deposited over 20,000,000 cubic yards of tailings into said streams; that the depositing continues at the rate of 8,000,000 cubic yards per annum, and that the deposit will be carried down the channels named to the agricultural lands in the valley, to the destruction of said lands. The answers, which are 17 in number, deny that defendants have damaged the plaintiff at all, and claim that they have acquired the right to discharge their tailings into the streams by reason of custom, usage and prescription. They also claim under the Act of Congress of July, 1866, the right of way for flumes, roads and dumps, and the use of streams for mining purposes.

The case is one of the most important that has been brought in California, and is regarded as a test case as to the question of mining debris. The only similar case heretofore tried in the State was that of Atkinson against the Amador and Sacramento Canal Company, which came up at Sacramento in January, 1877. On appeal, the case was reversed on a side question, and none of the main points were determined. Consequently it can be said that the case now on trial is the initial one of the kind. There is a great deal of interest manifested in the trial. The court-room has been daily filled with persons who are directly or indirectly interested in the proceedings, and the case promises to be lengthy and ably contested. At the opening of the trial, the defendants moved for separate trials. The Court denied the application. The plaintiff then offered his title papers and produced several maps showing the situation of the land in controversy and the adjacent country. The following is in condensed form the testimony of the various witnesses for plaintiff.

J. H. Keyes: I have known Bear river generally since 1850, and in front of my place since 1856. It was then clear, with abrupt banks about 12 feet high and gravelly bottom. The land was rich, alluvial and productive. There were two classes of bottom land, and higher up was red land. The river at very high stages overflowed the bottom and for a short time, about 12 hours generally. The first perceptible change in the river was in 1862, and it has been continual ever since, so that the original channel has become extinct, and a new one formed in another place. The old channel filled entirely in the winter of 1867-68, and broke across the high red land in Placer county, and ran into Yankee slough. Another channel, called new Bear river, was also formed, commencing at a point where the river leaves the foothills. The river has widened out and changes its position in the channel. My land has suffered from damaging overflows four times in the last three years. The deposits in the house and on the land did not dry for two or three months so that I could walk on it. The deposits affected the value of the land materially and destroyed its productiveness. I have not been able to use the land successfully for two years. I formerly raised 50 or 60 bushels of barley to the acre, and 30 or 40 bushels of wheat. Last year it raised less than 10 bushels of wheat and this year not over five.

The land covered by heavy material failed to produce wheat. About 300 acres of the land is covered deeper than I plow—about 10 inches.

Bear river runs promiscuously all over the bottom, shifting around and overflowing land formerly high. I made an effort to protect my land, and have spent \$12,000 or \$15,000 in leveeing. The overflows have rendered the land disagreeable to live upon. The water which came on in 1875-6 was tested and found to contain about one-third of its bulk sediment. Some of my land was filled above the fences, and they had to be raised and reset. The water in the river has been growing muddier, and the deposit of sediment in its bed greater each year, and, consequently, the danger to the valley lands is increased. The levees have to be increased in height about two feet each year. They are now about four and a half feet above the sediment, and I do not consider them safe if they are not heightened. I will probably be overflowed next winter, and my entire levee destroyed. It should be made about three feet higher than high water mark to be safe. The railroad bridge over the river has been raised about two feet. The town of Wheatland is on red land, and I judge that the river channel is now three or four feet higher than the land at Wheatland. There has been a quantity of

small stones deposited on my land. They are about the size of shot. When the mines above are shut down the water of the river is comparatively clear at my place. I attribute that to their stopping work. When their operations are resumed the water becomes muddy again. I have noticed that fact several years. This comparatively clear water can be used for irrigating and stock, but the muddy water is destructive to vegetation when used for irrigation and unwholesome for stock. The first freshet that comes each season is of clear and useful water, but the succeeding ones are muddy. I have noticed that fact for ten years. The sediment is productive alone of willows. Water of the river above the mining dumps is clear.

In cross-examination Keyes testified that, this year 100 acres of wheat planted on the sedimentary land will not yield five bushels to the acre. Have corn planted on the same land. It promises big stalks, but no ears. Potatoes produce large tops, but small potatoes. The average depth of deposit on the corn patch is two and one-half feet. Have other corn patches on thinner deposit, but it is unsuccessful. Planted it six or seven years and got nothing. Last year raised 18 tons of potatoes on 12 acres of sediment land. The land was not good for potatoes originally, and is worse now. Two years ago raised some beans, and have some in now. They are not very successful. Have 14 acres of alfalfa on land with three feet of sediment. Pastured 7 cows, 20 sheep, about 40 hogs, and about 3 horses on it one season; but the top roots rotted—too much water—and it died out. Think mining debris absolutely destroys the productive quality of agricultural land. When it is covered so that the plow will not go through it, I consider it worthless. I rented some of my sediment land for \$8 an acre this year, but the tenant will lose \$75 or \$100. Think that the failure of the land to mature corn is because of a lack of moisture. Put in some in grain in 1875, after it got dry enough. The barley produced 8 or 10 bushels to the acre, and wheat was almost a total failure. The sedimentary land has a tendency to become foul with willows. It is difficult to keep them down, and hardly anything else will grow.

C. P. Berry, Speaker of the last Assembly, testified: Have resided about four miles from the mouth of Bear river since 1857. Am engaged in farming. Am familiar with Bear river up to the railroad crossing. Have known Keyes to be occupying his land since 1858 or 1859. He has been farming it like the rest of us. Think the Bear river has run over pretty much all his land, as it has over the other lands in the Bear river valley. When I first knew Bear river, in 1857, the water was clear and ran in banks of natural earth 10 or 12 feet high. The channel was clear and well defined. Keyes' land was overflowed in 1875. The filling of the river caused the water to flow over a ridge into a slough. The bed of the river became filled with slickens. It left in places sand banks, and in others fine mud. Do not think the deposit is at all calculated to add to the fertility of the land. Have the same character of slickens on part of my land, and I have never since tried to use it. I deem it almost worthless. The deposit dries and cracks, and the land could not be used unless it was pulverized. Have abandoned my sediment land since 1862. Have run a levee to leave it out, since it benefits me only by producing willow and cottonwood for firewood. It overflows every year. I consider the deposits very deleterious. Think between 8,000 and 10,000 acres of land have been destroyed in Bear river valley by deposits. Have observed that in summer after overflows we have more sickness; think it is caused by the deposits.

A. L. Chandler testified: I have farmed near Bear river since 1855. Have been familiar with that river since 1852. Was at Keyes' house just after the water went down in 1875. Found mud two feet deep there. The mud was nearly up to the floor of the house. Know that the soil had been very fertile prior to the overflow, and had raised from 40 to 50 bushels of barley per acre and 30 to 40 of wheat. It was black, alluvial, first-class land. Consider it almost entirely ruined by the deposits.

James Harrison testified that he resides in Placer county, near the junction of Bear river and Greenhorn, and has lived there 22 years. He mined on Bear river from 1856 to 1861; then took charge of a portion of Bear river ditch, about 14 miles long. Up to 1862 there was no sediment of consequence in the water. About two years ago he tested the water and found about one-fourth solid matter in suspension. He knew that large quantities of sand, etc., pass over the ditch dam down the river. The water of the ditch is settled by several reservoirs in the mountain gorges. Reservoirs about 150 feet long by some 90 wide, and 25 feet deep. The reservoirs have sluice-ways at the head of the ditch to remove deposits from the water. He sluiced out the reservoirs about three times a week. The reservoirs would fill up with slickens in one day, and heavy sand would sink through to the bottom. The water in the river gets low and clear comparatively about August. I have seen heavy stones in Bear river 12 or 14 miles below Greenhorn, which came down since 1861. The water in the early freshets carries down more slickens, but is by no means clear. It could not be used for domestic purposes or for animals. There is very little difference in the water of succeeding freshets.

D. A. Ostrom, Assemblyman from Yuba, testified: Have been a farmer since 1852; now reside in Yuba county; lived from 1853 to 1867

in Sutter county, a mile above plaintiff. Worked the land in controversy at times till 1860. It was originally first-class sandy alluvial; cut 80 bushels of barley to the acre on Keyes' ranch in 1860. Noticed a large deposit made in 1875 and 1876; when on the ranch last week noticed that land formerly the most productive was now entirely destroyed; several hundred acres are destroyed. Think the deepest deposit 10 or 12 feet deep; have seen sand drifted up like snow; have never raised a good crop on the land with any considerable sediment. Where we cannot plow things will not produce; think the effect disastrous, to put it mildly, to Keyes' land. Have seen poor crops on his ranch since 1875—hardly worth cutting. I attribute this result to the debris. The population outside of Wheatland has decreased on the Bear river about one-half since 1862. There are now about 150 persons living on the river, and 200 or 300 in Wheatland. River water has been muddy since 1862; the water was originally clear; it is becoming muddier annually; never noticed extensive filling till 1861-62. The river banks at first were from 10 to 14 feet high, with a pebbly bed. The channel in 1867-68 at Johnson's crossing filled about 10 feet, and six miles lower down two to five feet. It is bottom land a mile and a half wide at Johnson's crossing; the deposit there is from high land to high land. Keyes' land is nearly destroyed for grain raising. The water of the river is unfit for use for house and stock; never tested it for irrigation. Do not think it good, as it would leave a sediment poisonous to vegetation. Very few trees in Keyes' orchard are left. His corn looks very well. Don't know how it will produce.

Thos. Brewer, Sr., testified as follows: Have been engaged in farming on Bear river since 1852; have known the land owned by Keyes since 1856. When I went there the water in Bear river was clear; debris and sand have covered most of Keyes' land; before his land was covered it would produce from 30 to 40 bushels of grain per acre; it had been damaged by overflow and sediment three-fourths of its value. The water was more clear in November, when the first freshets came; the channel has been filling gradually every year, and the deposits of sediment prevent successful cultivation of the land. The crops grown by Keyes during the past few years have not been good; Keyes and myself built the levees to keep the water and debris off our lands; we commenced building them at the foothills, and continued along down; first built them seven feet high; without them our land would be of no value to us for farming. Keyes and myself bought land to get the right of way along the river above us to build our levee on; the owners would not join us and we had to buy them out. In the first years of my residence on Bear river I saw hundreds of salmon in the water, and killed 17 in two hours with a shotgun. During the past 16 years have not noticed any at all. We paid between \$18,000 and \$20,000 for the right of way for levees. The old levees would not answer the purpose, and we had to build new ones.

W. O. Armisted did little more than corroborate previous testimony.

Henry Haile testified that he was a farmer by occupation; lives on Bear river; knows the Keyes land and the condition of the crops at the present time; they were very poor crops; have tried to grow crops on similar land, but with poor success. The road along Keyes' land in 1876 was almost impassable on horseback; knew a man to get down in mud in January, 1876, and could not get out; he cried for help and I went to his assistance; think he would have died if he had not been assisted, as he was nearly exhausted.

Dr. D. P. Hurst said: I live on my farm on Bear river. Have seen the deposit on Keyes' land made in 1876. This debris has the effect to destroy the crops and plants.

William Singer, an officer in the United States Land Office at Marysville, was called to produce a letter and the record of the office as proof of the listing of a certain part of Keyes' land by the Department of the Interior at Washington. Wilson, of defense, objected to receiving it, as not being an original document, but a copy. The question was argued at length by both sides, when the Court decided that it should be received for what it was worth, subject to a conditional objection in the future.

S. D. Wood, a farmer on Bear river, repeated the same story as the previous witness, Hurst. He had tried the water for irrigating his land, but it left a crust on the soil and closed the pores, doing more damage than good.

R. H. Huff, a farmer on Bear river, told his story, which did not vary much from those preceding him.

C. A. McCullough said he had worked about four years as a miller at McDonald's mill, on Bear river, about six miles above Wheatland. The sedimentary deposits filled up the ditches carrying the water to the mill, and sluices had to be constructed in several places to clean them out. They run the mill several years until about 1876, when the old wheel had to be cut out. The deposits had filled up around it so as to make it impossible to run longer.

Cyrus Stoddart corroborated the main points of the evidence of the previous witnesses.

P. E. Drescher testified that he was a farmer and surveyor, and was well acquainted with Bear river, and gave his observations and figures of measurement taken at different points along the river, and also of borings on different sections of Keyes' land. The testimony occu-

pied much time, but really did not throw much new light on the subject. In cross-examination he stated that he thought the bed of Bear creek at Steep Hollow had raised from 60 to 75 feet since 1849.

Col. T. B. Ludlum testified: I am here in the interest of defendants. I know the hydraulic mines on Bear river, described in the complaint: The gravel bed of the mines is from three-quarters of a mile to a mile and a half wide from the outer edges of side wash. This auriferous earth is composed of sand, quartz, slate and trap boulders. Some sections have pipe clay.

Ludlum said he had seen the various claims mentioned in the complaint which dump into Bear river or its tributaries. The Cedar creek claims use about 2,400 inches of water. He described the points at which the claims dumped. More water was used at times, which did not go through the pipes. The Polar Star had two pipes, with about six-inch nozzles, and used about 1,500 or 1,600 inches of water. The Elmore claim used 850 or 1,000 inches. Staples Bros. used about 800 inches; the Pine Top mine, about 500; Dekamp, about 300 or 400; the Boston claim used the same amount. Do not know how much other claims use. They all run from four to nine months of the year, between March and September. Most of them are hydraulic mines. Never estimated the amount of earth moved in a day by one inch of water, but it is from two to six cubic yards—that is, in 24 hours. The companies named worked from 5 to 24 hours daily.

Van Clief asked from what source the water used in the mines came, and proposed to show that it really all came from sources whence naturally it never would reach the river. The Court ruled the testimony out, on objection.

Witness—The river is about one-third of a mile wide opposite Dutch Flat. The two claims farthest removed are nine miles apart. The several claims spoken of in the testimony are worked independently of one another, and the companies are not connected. Do not know how much matter any mine has discharged. Many days no water is used in the several mines. About three yards of heavy material is removed daily at the Polar Star in the washing season. The water is comparatively clear above that mine. All the mines mentioned in the complaint dump their tailings on land possessed by them.

W. F. Peck testified that he was a surveyor. He was with the Drescher party which explored the river recently. He produced 14 bottles of water taken from the river and tributaries at different points; also sediment from plaintiff's land. His testimony was generally the same as that of Drescher.

Additional testimony will be presented in our next issue.

AGRICULTURAL NOTES.

California.

BUTTE.

COTTON GROWING.—*Record*, Aug. 3: John Thompson, with Thomas & Co., last spring, sent back to Georgia and procured a few seeds of cotton. He planted them in a corner of the vacant lot in the rear of their store on Second street. The plants, some two dozen in number, are now over two feet high, appear to be in a fine healthy condition and are just beginning to bloom. They are likely to demonstrate that cotton can be grown in California.

EL DORADO.

A BUSY PLACE.—*Republican*, Aug. 2: The Hulburd fruit canning and drying factory is the busiest hive of industry to be found in this section at the present time. The establishment, in the various departments, now affords employment to something like 50 white men and boys, and the amount of fruit that is transformed from its natural state into dried and canned goods, is really wonderful to behold, and yet the business has not yet nearly reached its height. A new drier is being constructed, more especially for the curing of raisins, with a capacity to hold 20 tons of grapes at a time. This is constructed after the Blower model, which is said to turn out raisins equal to the best sun-dried. The Hulburd drier is now being run to its full capacity on peaches, apples and pears. The machinery and apparatus used throughout the establishment is of the best and most approved kinds, and is under the constant supervision of men brought up to the business. The dried fruit is treated before drying with a patented process, which causes the fruit to retain its natural flavor and color, making it far superior to fruit not so treated.

LAKE.

CROP PROSPECTS.—*Bee*, Aug. 1: The crop prospects in this county are somewhat more favorable than they were a few weeks ago. Early wheat that was not affected by heat or rust is yielding very well and the rust on late sown is not doing the damage supposed. P. M. Daly thought two weeks ago that his crop and many others affected like it by rust would not be worth cutting, but the rust is now disappearing and he thinks he will make at least half a crop. We learn from others that the rust is not nearly as damaging as was supposed, though it has shortened the late crop very much. The army worm too, which it was feared would materially damage the corn and potato crops, has about disappeared, and we may expect an average crop of each.

LOS ANGELES.

ORANGES.—*EDITORS PRESS:* The people of this settlement never were happier. Their all is vested in orange orchards, and this being the first season that they have had an unlimited supply of water they are naturally in ecstasies. The new Santa Ana ditch is working to the satisfaction of all. It is as large, some say larger, than necessary. Ten acres of orange trees that were planted four years ago, changed hands, last week, at \$6,000. The land was worth about \$10 an acre when the trees were set out. I mention this sale to show you how fast a field will grow in value, set out with orange trees.—J. M. M., Orange, Cal.

THE FAIRS.—*Express:* The Horticultural Society will have their new hall ready by October 14th, and there will be ample space for the contribution of every exhibitor. The farmers throughout this county are taking a lively interest in the fair, and we have no doubt that every county in the district will come forward with their best contributions. During the same week, the District Agricultural Society will have their fine park open for the exhibition of live stock, and tests of speed of blooded horses will be made on the track. The programme of the speed matches has been partially arranged and published, and we are assured that it will materially help to swell the interest of the occasion. We believe that the two societies will offer such attractions this fall as will draw together an immense crowd of people, not only from our own district, but from all parts of the State.

MENDOCINO.

THRASHING.—*Ukiah Press*, Aug. 2: Thrashing is progressing slowly in Potter valley. The following named persons have got through with the ordeal, but are casting about for means to pay expenses: J. M. White, 188 bushels; E. G. Maze, 537; G. W. Pihel, 814; John Mewhinney, 1,341; S. H. McCreary, 1,441; E. N. Jones, 700; S. Neil, 184; Gopart, 122; B. Pemberton, 556; I. Y. Griffith, 134; George McCowen, 510; G. B. Nichols, 544; J. Miller, 818. Making in the aggregate 7,000 bushels. One-third of this is barley and oats, leaving the wheat crop less than one-half that grown last year on the same acreage, which is an indication that the "staff of life" will be scarce in Potter.

MERCED.

FRESH VEGETABLES.—*Argus*, July 27: Mr. John Alexander is the cultivator of the garden of Capt. Weed, and, considering the soil, which is a heavy black adobe, strongly impregnated with alkali, and the persistency of the salt grass in asserting its prior right, Mr. Alexander has proven himself to be a horticulturist of experience and determination, for no better flavored or more smooth, well-proportioned vegetables have ever been brought to town than those of which we speak, and yet, strange to say, Mr. A. finds but limited sale for them. It is preposterous to think that people—hotel keepers, private families, etc., prefer the half decayed, unhealthy, tasteless trash from San Francisco to the fresh, crisp, well-flavored fruit and vegetables produced in their own county, and offered for sale at their doors.

NAPA.

ST. HELENA WAREHOUSE.—*Star*, Aug. 2: The Warehouse Association have bought a lot of Mr. Edwards, adjacent to the Baptist church, where the building will be placed. Work has begun, and the building will be completed in about six weeks. Articles of incorporation were filed in the State Secretary's office at Sacramento, on Wednesday. The name is to be the St. Helena Warehouse Association. Capital stock, \$25,000. Stock, \$25 per share. Directors, Messrs. Lewelling, Krug, Schieffler, Beringer and Thomaun.

SACRAMENTO.

THE LEVEES.—*Record-Union*, Aug. 3: We understand that at Bryce's place a core of planking is set in the center of the levee, that is, the core is built up of driven piles, planked over, and the levee built over this core. Thus, if the waters wash away the outer earth, they will encounter the core of planking, backed by heavy embankments on the inside of the levee. The new levees are better and higher than ever built before, and it is entirely probable that before winter sets in, the entire opposite side of the river to the city will be leveed, except probably at Todhunter's ranch and the English slough, as the leveeing of one ranch above moves the owner next below to do likewise, an operation which will extend entirely down to and past the city in time. To give an incentive to leveeing the Supervisors of Yolo have given notice that they will issue to all levee builders along the Sacramento river, as below described, certificates of indebtedness to the amount of seven per cent. of the cost of levees built, if made three to one slope on both sides and 12 feet on top, that the county may use the same for roadways, this to apply from English's break to Billings' farm, a distance of between four and five miles, which includes all the breaks of last winter above English's, clear up to Fremont bend, where there has been no levee for years.

SANTA BARBARA.

BENTON'S SQUIRREL KILLING.—*Enterprise:* Messrs. J. C. Benton & Merchant, the squirrel exterminators, have secured Mr. Stearns' old quarters at the lumber yard, for their headquarters, and have decided to locate here permanently, and in a few days will begin the manufacture of their wonderful squirrel and gopher exterminator. They have a number of orders to fill, and will employ four or five men

at first, and as business increases they will increase their force. A number of letters have been received from Los Angeles urging them to come down there, and Mr. Benton will start for there in a day or two. We suspect the squirrels and gophers in that vicinity are in a terrible suspense. Over 25,000 of these pests have been destroyed in this vicinity during the few weeks these gentlemen have given their attention to this part of the county.

SANTA CLARA.

EXTENSIVE GRAIN FIRES.—*Mercury*, July 31: About two weeks ago we chronicled an account of a destructive fire in Robert Welch's grain field, between Milpitas and Berryessa. About a week afterwards his header was burned in Martin's field. Yesterday morning, between 8 and 9 o'clock, the men working on the threshing machines in Mr. Welch's field discovered fire issuing from the grain about half a mile distant. On reaching it, with the assistance of others who had arrived, the flames were extinguished, and all was supposed to be serene again. But scarcely had they finished before another fire was seen at some distance from them. This was also put out after considerable exertion. Not long afterwards two fires broke out about the same time in the stubble a short distance from each other, at points between the men and the thresher. A large force of neighbors and field-hands had gathered by this time, and with wet sacks the flames were extinguished. Believing that the fires were attributable to human agency, a search was made, which resulted in the discovery of pieces of fence wire, one end of each piece being imbedded in the ground, to the upper end of which was fastened a short piece of candle wrapped in paper saturated with some combustible fluid. Two broken bottles were also found, besides a quantity of matches scattered about. The incendiaries evidently laid their train the night before, expecting that the candles would burn down and the fire communicate to the papers and thence to the grain and stubble. The farmers thereabouts have no idea who their enemies are. A petition is being circulated to raise money for a fund to be offered as a reward for the apprehension of the dastardly scoundrels.

SONOMA.

CARP WILL SPAWN IN THE SECOND YEAR.—*Flay*, August 1: Last week Mr. Rodgers discovered that some of his carp has spawned in their second year. During last winter his ponds overflowed into a slough, and passing this body of water on last Friday, he saw indications of fish. Begging the privilege of his neighbor to draw a net across it, he soon landed 21 yearling carp, some of them being two and one-half inches deep, one inch thick and seven long, about the size that he paid Mr. Poppe \$5 for when he commenced the business. This was undoubtedly the result of the overflow; many must have found their way into the river, and others were killed by the ducks and geese. They were so lively that he was compelled to draw his net 10 times before being able to get them all out.

TULARE.

WHEAT.—*Delta*, Aug. 2: The purchase of wheat in this county has been very active since harvest commenced, and the price has steadily advanced. As high as \$1.35 was paid for a first-class lot of milling wheat, in Visalia, several weeks ago. We have heard of a recent sale of \$1.36½, and the indications are that ere long the best lots will bring \$1.45 or \$1.50. A large portion of the grain on Kern Island has been sold at the San Francisco market price. But for the fact that so many of our farmers are behindhand, and obliged to sell to satisfy store bills and mortgages and to pay help, wheat would have been considerably higher here. We hear of an offer to bond one man's crop for 30 days at 40 cents, by an advance of \$200, which was refused. Barley is still without much demand, holding at 50 cents per cental.

The Fair Season.

The following is a partial list of the coming fairs. We shall be pleased to add to it if readers will send us the dates and locations of their respective exhibitions:

San Francisco Mechanics' Institute, San Francisco, August 13th to September 14th.
California State Agricultural Society, September 16th to 21st, inclusive.
Oregon State fair, at Salem, October 8th to 18th, inclusive.
Nevada State Agricultural, Mining and Mechanical fair, at Reno, October 7th to 12th, inclusive.
Montana Agricultural, Mineral and Mechanical fair, at Helena, September 23d to 29th, inclusive.
Sonoma and Marin district fair, at Petaluma, September 23d to 25th, inclusive.
San Joaquin valley district fair, at Stockton, September 24th to 28th, inclusive.
Northern district fair, at Marysville, September 23d to 28th, inclusive.
Golden Gate district fair, at Oakland, September 9th to 16th, inclusive.
Napa and Solano district fair, at Vallejo, September 3d.
Monterey county district fair, at Salinas City, October 8th to 12th, inclusive.
Siskiyou county fair, at Yreka, October 21 to 25th, inclusive.
El Dorado county fair, at Placerville, September 13th to 15th, inclusive.
Santa Clara valley fair, at San Jose, September 30th to October 6th, inclusive.
Stanislaus County Stock Growers Fair, at Modesto, October 9th to 11th, inclusive.
Southern California Horticultural Fair, at Los Angeles, October 14th to October 19th, inclusive.
Southern California Agricultural Society's Fair, at Los Angeles, October 14th to October 19th, inclusive.
Plumas, Lassen and Modoc District Fair, at Susanville, Lassen county, October 21st to 25th, inclusive.

News in Brief.

IN Iowa, corn promises as well as last year. The crops of Oregon are, on the whole, good. POTATO crops in Clear Creek county, Col., good.

THE Mayor of Jefferson, Texas, receives a yearly salary of \$1.

MICHAEL REESE died on August 2d at Wallenstein.

BEACONSFIELD and Salisbury were feted by the city of London on August 3d.

ON August 2d, \$7,000,000 worth of the 4% bonds were sold.

ON August 2d, Capt. Webb swam 22 miles in the Thames, without rest.

IN western Iowa the yield of wheat this year will be 12 to 15 bushels per acre.

INSURRECTION in Herzegovina; Governor of Mostar assassinated.

THE highest temperature in San Francisco during July was 73°; lowest, 51°; average 57.8°.

ON August 1st a tornado swept through eastern Indiana, damaging crops, trees, and buildings.

UP to August 3d, the total number of yellow fever cases in New Orleans was 233; deaths, 60.

IT is estimated that the salmon catch on the Columbia river, this season, will aggregate 380,000 cases.

IT is unlawful to catch salmon in the San Joaquin and Sacramento rivers before the 1st of November.

THE number of deaths in San Francisco during the year 1877-78 was 4,977 against 6,170 the previous year.

THE entire yield of wheat in Michigan this year is 30,000,000 bushels, an average of from 19 to 20 bushels per acre.

JOHN ROBINSON, near Fort Benton, Montana Territory, in nine days, took out, with a rocker, \$4,000.

THE largest flour mill in the world is now being built at Niagara Falls. Capacity, 1,200 barrels per day.

ABOUT 18 citizens of Umatilla county, Oregon, were killed and 11 wounded during the Indian raid.

A PARASITE called the "scale louse" is spreading destruction among the orchards of Santa Clara valley.

A SYNDICATE of English capitalists has been formed to open the Cariboo quartz reefs, where prospecting is progressing satisfactorily.

ON the 1st of August, Alta, Utah, was entirely destroyed by fire; loss may reach \$200,000.

NINE vessels are reported lost, and six ashore in a storm on the southwestern coast of Cuba, on the night of July 30th.

THE will of Whiting Street, of Northampton, Mass., who was worth half a million dollars, leaves about \$25,000 for charitable purposes.

MANUEL BRIN has discovered a ledge eight feet wide, averaging \$17 in gold, and \$20 in silver, 18 miles north of Pyramid lake, Nev.

STAGE, 18 miles from Tucson, was robbed August 3d. Express box empty; mail sacks contained little; the passengers lost \$37.

WITH a view to extensive distribution of the tea plant in the Southern States, 300 pounds of the seed have been lately sown at Washington.

JOHN BURNS has instituted suit against the Southern Pacific railroad to recover \$51,120, damages sustained from one of the company's locomotives.

THE total length of railroads in the world at the end of 1876, was 184,002 miles. America has nearly as much as Europe. The United States have 74,095.

ON August 4th, lightning struck a Sunday school tent in Philadelphia. One scholar was instantly killed; three others were fatally injured; all were knocked down.

DURING the past year, the Experimental Department of Agriculture at Washington, distributed over 20,000 tea plants, grown in the green-houses of the department.

DURING a severe thunderstorm, July 31st, Valk & Co.'s planing mill, at Rock Island, Iowa, was struck by lightning and burned to the ground. Loss, \$25,000; only \$1,000 insurance.

THE British ship *Lock Ard*, from London for Melbourne, with a cargo valued at \$350,000, was lost near Cape Otway, June 1st. One passenger out of 17 was saved; also only one out of a crew of 32.

OWING to the prostrate condition of the cotton trade, Hornby & Son, the large mill-owners in the Blackburn district, have given a fortnight's notice to their operatives that they will close their mills.

THE worst injury in the Northwest to wheat, from the excessive heat this year, has been in northern Iowa and southern Minnesota. The yield will not be greater than 10 bushels per acre.

THERE will be as much business for the Chicago and Northwestern railroad in every article of grain, except wheat, as there was last year. The damage to the crops has been considerably over-estimated.

THE Chinese Ambassador, Chun Lan Pin, and suite, together with the Consular corps, left San Francisco, August 2d, on a special car, via the Rock Island and Lake Shore railroad. On arriving at Hartford the Ambassador will leave most of his suite and proceed direct to Washington, where he will present his credentials to the President of the United States. After visiting Washington he will start from New York for Madrid, returning to Washington in December.



"Birds of Killingworth."

Think of your woods and orchards without birds!
Of empty nests that cling to boughs and beams
As in an idiot's brain remembered words
Hang empty 'mid the cobwebs of his dreams!
Will bleat of flocks or bellowing of herds
Make up for the lost music, when your teams
Drag home the stings harvest, and no more
The feathered gleaners follow to your door?

What! would you rather see the incessant stir
Of insects in the windrows of the hay,
And hear the locust and the grasshopper
Their melancholy hurdy-gurdy play?
Is this more pleasant to you than the whir
Of the meadow lark, and her sweet roundelay,
Or twitter of little field-fares, as you take
Your nooning in the shade of bush and brake?

You call them thieves and pillagers; but know,
They are the winged wardens of your farms,
Who from the cornfields drive the insidious foe,
And from your harvests keep a hundred hurns;
Even the blackest of them all, the crow,
Renders good service as your man-at-arms,
Crushing the beetle in his coat of mail,
And crying havoc on the slug and snail.

How can I teach your children gentleness,
And mercy to the weak, and reverence
For life, which, in its weakness or excess,
Is still a gleam of God's omnipotence,
Or death, which, seeming darkness, is no less
The self-same light, although averted hence,
When by your laws, your actions, and your speech,
You contradict the very things I teach?

—Longfellow.

Always Prospered.

In Farmer Nevins's great shed, with wide doors opening to the east and west, were three men preparing scythes for the haying, which was to begin in earnest the next day.

William Nevins never let his work drag. Just now he was telling Bailey and Benson, hired men, that when he first came to this town he had only the clothes on his back, and less than a dollar in money. Said he: "The first year I worked like a dog for \$12 a month and board—high wages for those times; many a one didn't get as much. Next I took a farm on shares and so on, till now I've got four as handsome cattle, two as good horses and nine as good cows as you can scare up—all by work."

"And trading," put in Benson, with a wink. "Well, yes; I've traded some in horses and one thing 'n another, I'll allow."

"Get some of your work done pretty cheap; that helped some, I s'pose," said Bailey.

Nevins winced a little. He remembered just then what old Parson Humphrey had said to him about "oppressing the poor;" but then, he didn't believe it, not a word of it. Hadn't he prospered every day, adding dollar to dollar, till he had two as fine farms as were to be found? So he said: "Well, I don't know's it did; them cheap fellers are a bother; it's about's much as they're wuth to hev 'em 'round sometimes."

As he stood in the broad door open to the west, while the men ground their scythes, he cast his eye around over the fair scene of his labors and gains. The afternoon sun sent long, slanting beams, up from the valley, across Clearwell Pond, over the fair, fruitful hills, and the lovely June picture, with all the wonderful lights and shades of color, in orchards, growing grain waving grass and contented cattle, was reflected back in its clear water, till paradise or a pearl palace were not more beautiful to look upon.

Yet only the sense of ownership filled this man's soul; the exquisite picture touched him not at all, he did not even know it was there. The pond was good for fish, the fields for food and fodder; what more could one want?

Bailey and Benson had finished their scythes, and now farmer Nevins would hold his to be ground; for he still worked as hard as ever, though he had three sons old enough to mow. He wanted his scythe sharp, for he liked a clean swath.

"No slack work for me," he said, and as the words escaped his mouth, the stone over which he stooped and held the tool while the man turned, broke in three pieces and fell at his feet. "Lord A'mighty," he gasped, "what does that mean?"

The boys were just then coming in to grind, while the hired men stood looking at the strange thing.

"A good, warranted stone, without crack or flaw, to break like that, with hand turning!" Farmer Nevins felt awed and nervous over it; so secure and certain of his control of means and ends a few minutes before, he did not care to show how much this comparatively little thing had startled him. The hired men said they'd never heard the like before.

"Well, anyway," said he, "if I can't grind I'll whet; must have my scythe sharp somehow."

He sat down to do this, when, after a few rubs along the edge of the whetstone, the very tool he was using broke in three pieces. The man, awed and frightened, was pale as ashes. He was between 50 and 60 years old, and had worked with tools and had used such stones all his life, and had never seen or known of such a

thing to happen before. He was superstitious, too. Nothing had ever gone wrong with him, and he had begun to believe nothing ever would; yet in the minute he sat there, with the one broken piece in his hand while the others lay at his feet, the memories of years of his selfish, grasping, mocking life whirled through his brain, as if he had been drowning.

The hired men, first to recover from their surprise, perhaps not sorry to see their employer at a loss for once, rallied him by saying, "Guess old Ben Bowers or Jim Lane's bewitched the stones."

"Perhaps," said Benson, "it's the Widder Green that blessed you so about the wood and potatoes you sold her."

But the men soon saw it would not do to say more; it was too serious an affair. At supper Mrs. Nevins observed her husband's unusual look, and when told the strange things that had happened she was sober; for she, like her husband, was believer in omens. She was, however, more thoughtful, more considerate of others, read her Bible more, and believed it as much as she had time. When a few moments could be found, on Sundays or night, when she was not too utterly tired out, and after her husband and children were asleep, she would read a few words in the Testament before retiring.

This women had never thought of the sin of constant overwork for the sake of gain. It had never occurred to her that to abuse her own body and that of her unborn children, by goading herself to labor far beyond her strength, was committing sin. She had often feared that the wicked course of her husband toward those whom the Bible denominated "poor" would not prosper. In all else she was as ready to sacrifice everything for gain as he. When sometimes she would venture to ask if he wasn't a little hard, or hint that he mightn't prosper as well, he would answer, confidently:

"Now, Lidda, that's all nonsense. I've allus done it, and I've allus prospered, that you'll allow. You know, Lidda, you can't name another man that's got along as I have. Old Priest Humphrey's allus a harpin' on considerin' the poor, and repentin' and stuff."

"But, you know, William," gently added Mrs. Nevins, "that we ought to be prepared."

"Yes, yes, you're right, I s'pose. I must 'tend to it. One of these days I shall."

The next day haying was commenced, as proposed. The men worked as well as ever. The teams went to and from market with butter, berries, garden stuff and wood. The barns were filled to bursting with fragrant hay. Everything went on well as usual, except that Mrs. Nevins was not feeling very well—nothing serious, perhaps, but she was weak, and her work dragged.

The days wore on, and the wife had really to take her bed. Nevins went at once for the doctor. He loved his wife as much as he could love anybody, while to get along without Lidda was not to be thought of. He told the doctor to spare nothing that would do her any good, and waited, with feverish impatience, to learn the cause and character of her sickness.

Following the physician to the door he nervously asked—

"What ails my wife? and how long will she be likely to be sick?"

The doctor answered: "Typhoid fever. How long she may be sick I cannot tell."

Everything was done for the sick woman now. Nevins left his work to the boys, and saw that his wife needed nothing. Her bed was moved to the great spare room, where she had found no time to stay in the long busy summer days, for there had always been endless work in that great driving household. Now she had time to occupy it, but she was weak and sleepy and didn't mind how cool and still and pleasant the room was. Utterly worn out her system offered no resistance to disease, and in less than three weeks she lay quietly in her grave.

The husband, grief-stricken, distracted by her loss, wholly unaccustomed to sorrow or disappointment, left alone to bear this terrible affliction, was powerless to bear up under it, and he was soon a victim to the fever. If his wife had been living, to nurse and encourage him, there was nothing to hinder him from weathering it, at least so the doctor thought. The draft, upon his system had been less than upon hers. The calls of motherhood, with continued overwork, had made her recovery impossible. Improvement was possible in his case, yet he did not rally.

Very soon the children were fatherless, as well as motherless. The poor, stricken things, suffering from their great grief and from excess of labor while young and growing, gave but feeble resistance to a fever that had now attacked them, and which often seems to choose its victims well. One after another fell victims to this dreadful disease, until three sons and the eldest daughter, the latter 18 years of age, beautiful but frail, lay beside their father and mother.

It was only by great effort on the part of neighbors and friends that the younger children were saved, so hard is it to drive the terrible scourge out of families where, from any neglect of sanitary measures, or from any cause, systems are debilitated and liable to its attacks. Deep sympathy for the afflicted family was everywhere felt and expressed.

To those who lived near by, workmen and others, who had known the family intimately for years, were the questions forced upon them: "Was the breaking of the stones ominous?" "Was the breaking up of this man's family retributive?" Questions like these have always

been asked, and as variously answered as the convictions and intuitions of one soul differ from those of another.—*Ruth Rockingham, in American Cultivator.*

This Preverse Generation.

The *Argonaut* thinks our children have but little of the spirit and energy of their ancestors. The editor, enjoying a vacation in the northern part of the State, preaches the following lay sermon: Along the upper Pit and its many tributaries there is a magnificent grazing country, hundreds of miles in extent, sparsely populated, government land unoccupied, and open to pre-emptory, homestead, and settlement. The land is rich, and under cultivation will produce vegetables, grain, and all the hardier fruits. The climate is not as severe as that of New England, New York, or the Western States. The snow is not deep in winter, and does not linger as late in the spring as it does in the Eastern country named. Outside of these meadows and the beautiful valleys that margin the streams, the country is densely wooded with pine, cedar and spruce. All through the northern counties, embracing Shasta, Trinity, Siskiyou, Humboldt Modoc and Lassen, there are valleys, some larger and some smaller, many of them entirely unoccupied, where homes may be obtained without cost or the expenditure of any other capital than that of labor. There are level lands bordering the streams, the timber growing upon them indicating a rich soil. The waters abound in fish; the hills abound in game. During the season all along the upper Sacramento and beyond Shasta the streams that empty into the ocean are filled with salmon.

The hills are sometimes abrupt and sometimes stretch away in gentle slopes, bearing evidence of their strength and depth of soil in the splendid forests that climb to their very peaks. All these hill and mountain sides are watered with streams, rivulets and springs, so that irrigation is cheap and practical. The rainfall, as indicated by the exuberant and almost tropical vegetation, is abundant. If these mountains were Alps or Appenines they would be cultivated to their summits, and the region be thronged with a hardy and industrious population. It is in such mountain fastnesses that religion and liberty have made their grandest struggles. And yet this splendid reach of mountain and meadow, this broad breadth of hill and valley, these margins of splendid rivers, this great wealth of land and water, of wood and soil, lie almost unoccupied. Here and there scattered through the wide domain, is the hut of the hunter or herdsman, and along the highways and centers of travel the more comfortable cottage of the farmer and home of the innkeeper. There are homes and farms here in our northern counties for a million of families. There is affluence, plenty and abundance, grain, fruit and vegetables, comfort, ease and independence, awaiting the industrious toiler. Our fathers, half a century ago, would yoke their cattle, cover their wagons with cotton canvas, load them with wife, children, hams, bacon, maple sugar, take axes, guns and dogs, plunge out into the wilderness, and by their labor carve out for themselves homes, lay broad and deep the foundation of States, build up civilization around them, and from barbarism create society. Our sons and our foreign immigrants in these degenerate days have no nerve for this pioneer work, no muscle to swing the ax, no courage to confront the forest, no daring to brave the dangers, and no patience to endure the hardships of a life of adventurous toil. Our boys are milk-sops—educated, nerveless, cowardly, hangers-on upon their mothers' apron-strings, petted, fondled, foolish, ruined darlings—who expect to live upon their father's earnings. They would be lawyers, doctors, politicians, adventurers, gamblers, thieves, anything but honest workmen. Our girls are a worthless set—becoming each year more worthless—and it is not their fault. We are educating them to become wives of rich men, playthings and ornaments of luxurious homes; and if they fail, and we fail, then God help them. Society is strewn with the wrecks, and the tempest has just begun. In another generation or two the American-born, will be a pitiable helpless thing. The sons of our sons, and the daughters of our daughters, will become objects of sympathy. If our nation has ever a peasantry, it will be from the American stock. The intellectual and over-educated can not conquer in the struggle against numbers and brute force. Our immigrant population no longer goes out to the hills and mountains, but throngs the cities; prefers to live in squalid pauperism, in sickly tenement houses, to be hungry, ill clad, ignorant and dirty, than to carve out a country home by toil.

TOBACCO-USERS.—It has become very common to invest chewing-tobacco and snuff in lead-foil. Herr Hockel examined some snuff from a quantity, part of which had been used by a patient who was laboring under a severe attack of lead poisoning, and found that it contained 2½% of metallic lead. The tobacco near the corners of the package, being more perfectly inclosed by the foil, contained the most lead, which is decomposed by dampness and remains in the tobacco or snuff in the form of carbonate of lead, which is the white lead paint of commerce, which inflicts such horrible sufferings on many of those whose business compels them to work in it.

Chaff.

A LADY who, in defiance of the English law, had married the brother of her deceased husband, was in the habit of alluding to her first spouse as "her poor brother-in-law."

"SAM, you are not honest. Why do you put all the good peaches on the top of the measure, and the little ones below?" "Same reason, sah, dat makes de front of your house marble and de back gate shielly slob bar'l, sah."—*Boston Transcript.*

It is well to look at both sides of a fan. On a "heated" Sunday in Philadelphia the other day, the minister was fanning himself vigorously. He did not see, but the congregation did, that the reverse of his fan bore the inscription, "Buy Boggle's Bitters."

At a funeral in Ireland the clergyman had not been informed of the sex of the deceased. He accordingly leaned over to the sexton and said: "Shall I say 'brother or sister here departed?'" "It's neither sirr," whispered the man; "shure he was only an acquaintance!"

POET (fingered a volume of his poems on the table): "Oh, I see you have got my poor rhymes, Mrs. O'Flatherty!" Mrs. O'F. (conscious that the leaves have never been cut): "A—yes—er—it's a new copy. The other was so dog's-eared and tattered that we were quite ashamed of it, and had to put it in the fire!"—*Punch.*

A LOVER who had "gone West" to "make a home" for his "Birdie," wrote to her: "I've got the finest quarter section of land (160 acres) I ever put my foot down on." Birdie wrote back: "Suppose you buy another quarter section, John, so we can have a lawn around your foot!" John "made a home," but Birdie never was the mistress of it.

A MAN was once brought before the late Judge Stevens of Lawrence, charged with a petty offense. The respondent proved that the offense was committed across the line in the town of Salem, N. H., and pleaded in bar to the jurisdiction of the court. "Exactly," replied the court, "but you had your mind on it in Lawrence, and I fine you \$5 and costs."

This is the way the *Mark Lane Express* tells a member of parliament that he lies: "To Mr. Rylands should be awarded the prize for having made within a given time the greatest number of mistakes and misstatements. There could be a better way of getting at the truth upon the question at issue than that of turning all Mr. Ryland's affirmatives into negatives, and all his negatives into affirmatives."

SLURS ON WOMEN.—Of all evils prevalent among young men, we know of none more blighting in its moral effects than to speak lightly of the virtues of women. Nor is there anything in which young men are so thoroughly mistaken as the low estimate they form as to the integrity of women. Not of their own mothers and sisters, but of others, who, they forget, are somebody else's mothers and sisters. As a rule, no person who surrenders to this degrading habit is to be trusted with an enterprise requiring integrity of character. Plain words should be spoken on this point, for the evil is a general one, and deep-rooted. If young men are sometimes thrown into the society of thoughtless or depraved women, they have no more right to measure all other women by what they see of these, than they have to estimate the character of honest and respectable citizens by the developments of crime in our police courts. Let our young men remember that their chief happiness in life depends upon their utter faith in women. No worldly wisdom, no misanthropic philosophy, no generalization, can cover or weaken truth. It stands like the record of itself—for it is nothing less than this—and should put an everlasting seal upon lips that are wont to speak slightly of women.—*Faith Ripley in Rural New Yorker.*

A LESSON FOR ALL.—Look most to your spending. No matter what comes in, if more goes out you will always be poor. The art is not in making money, but in keeping it; little expenses, like mice in a large barn, when they are many, make great waste. Hair by hair the head gets bald, straw by straw the thatch goes off the cottage, drop by drop the rain comes into the chamber. A barrel is soon empty if the tap leaks but a drop a minute; when you mean to save, begin with your mouth; many things pass down the red lane. The ale jug is a great waste. In all other things keep within compass. Never stretch your legs farther than the blanket will stretch, or you will soon be cold. In clothes, choose suitable and lasting stuff and not tawdry fineries. To be warm is the main thing, never mind the looks. A fool may make money, but it needs a wise man to spend it. Remember it is easier to build two chimneys than to keep one going. If you give all to back and board, there is nothing left for the saving bank. Fare hard and work hard while you are young, and you will have a chance to rest when you are old.

TESTING DIAMONDS.—A simple method, according to an exchange, of discriminating between real and spurious diamonds, is to immerse the specimen in water. If a genuine diamond, it will sparkle with almost undiminished light and brilliancy of color; but if it be spurious, whether paste or rock crystal, the "fire" of the gem will be completely quenched. Another simple test is to draw a small steel file across the stone. If real, the stone will not be hurt; if imitation, it will be badly marred.

The Life of the Mammoth.

Prof. Henry A. Ward, of Rochester, who recently mounted the celebrated Stettgard mammoth, speaks as follows, in a letter to the Rochester Democrat, of the habits of the animal: But by far the greater mass of the great herds have left us nothing except their bones, teeth and tusks. The number and volume of these remains, which are dispersed over this entire region, is something almost incredible. Certain islands in the Siberian sea have the soil crowded full of them. This is particularly the case at the Laichovian Isles, north of the mouth of the River Seva. The tusks are so numerous and are in a state of such excellent preservation that they form an important article of commerce and are annually shipped in large quantities to Russia and to England, then to be employed by the ivory turner in the same works as is what may be termed the living ivory of Asia and Africa. The preserver in Siberia of these countless large bones, buried under ground and frozen in the ice, has long been a wonder to the inhabitants of the country, who had no reasonable explanation of their source or origin. With absurd credulity they attributed them to a gigantic mole, which they thought burrowed in the ground, living on roots and only appearing at the surface during the darkest nights. To this creature they gave the name of mammoth, which in their language is a term applied to any burrowing animal. This name has been universally accepted in Europe, but limited to the species studied by Cuvier, and described by his friend Blumenbach as *Elephas primigenius*. Cuvier showed the near relation of the mammoth to the modern Indian elephant, its degenerate successor, while another fossil species called *Elephas prisus* was more closely allied to the African animal. Bones of these and still a third species of mammoth are abundant in nearly every part of Europe from England to Spain and Southern Italy, although, strange to say, they become less and less abundant as we approach southern lands, the present home of the race.

In short, the mammoth was once an inhabitant of northern temperature and frigid zones; now his descendants inhabit the tropics. Its remains occur chiefly in beds of gravel, clay and other loose material of the post-pliocene age. In Europe, at least, it seems to have lived coeval with early man. In the bone caverns of England, France and Germany, those great charnel-houses of early animal life, there are found scores and hundreds of the remains of the mammoth commingled with those of the rhinoceros, hippopotamus, aurochs, cavern bear and other animals now quite extinct, or living in other continents. It is clear that the mammoth did not themselves crawl into these caves, often with an extremely narrow opening, and die there, nor do the surroundings allow the idea that they were brought there by the flow of waters. In many cases the abundant marks of teeth and gnawing of the bones show that they were dragged to the cave by wild beasts who made it their den and fed upon them. But in a few special cases the cavern has been the home of early men, who brought there remains of the animals which they had hunted and killed. In these caves there are found, with those of other animals, many bones of the mammoth, and of these every long bone, as those of the leg, has been carefully split open to obtain the marrow from the central cavity. Mingled with these bones are found here and there the flint knives and stone hatchets which served as utensils at these early feasts. On a tusk of a mammoth found in one of these caves in Dordogne, in Southern France, was a rude engraving of the animal itself, scratched thousands of years ago, with the sharp point of a flint. These troglodytes are now no more. They and their giant neighbor, the mammoth, have perished one after the other in the lapse of infinite ages by those changes of circumstances in the organic and inorganic world which are always in progress.

WAYS OF WASHING THE FACE.—There are several wrong ways of washing the face, and but one right. Towel, flannel, sponge are all out of place where the face is concerned. The hands only should be used. Doctor Wilson's directions are: "Fill your basin about two-thirds full with fresh water; dip your face in the water, then your hands. Soap the hands well, and pass the soaped hands with gentle friction over the whole face. Having performed this part of the operation thoroughly, dip the face in the water a second time and rinse it completely. You may add very much to the luxury of the latter part of the operation by having a second basin ready with fresh water to perform a final rinse." But the care of the complexion requires that not only the face, but the whole body shall be daily subjected to the bath. The sponge-bath is, perhaps, the best, and the temperature of the water must be regulated by the sensations of the bather and by the season of the year. No one can deny the charm of clear, soft color in the cheeks and lips—and it must be an incorrigible complexion indeed that will not yield to the measures that I have recommended.—*Cassell's Magazine*.

A MINNESOTA father, who has five grown-up daughters, has sued the county. He claims that his residence has been used as a court house for the past two years.

Young Folks' Column.

Some of Johnny's Troubles.

Written for the RURAL PRESS by LORAIN.

Johnny Wilson sat outside the door crying. He was crying because he could not have a pair of spectacles.

His mother usually gave him whatever he cried for, and so he cried pretty often.

As she did not have any spectacles to give him, he kept on crying louder and louder, till Fritz heard him and began to bark, and between them they made a great deal of noise.

Fritz was fond of Johnny, and whenever he heard him crying he would bark, and Johnny's mother said they nearly made her crazy.

She said a good many times that she should have to send Fritz off or give him away to somebody. But as soon as Johnny heard her he would begin to cry, and keep on crying till she would promise to let him keep his dog.

"What do you want of spectacles?" said his sister Nelly.

"Uncle Harry has some, and they're pretty and shine, and I want some, too," and he went on crying and Fritz went on barking, till his mother was glad to shut the door to keep out the noise.

Pretty soon Sarah Cook came out of the house in the next yard. She looked over the fence and commenced to laugh.

Johnny opened one eye and looked at her, and then he stopped crying and walked slowly into the woodhouse, and stood where she could not see him. He did not like Sarah very well, because she called him a cry-baby, and he did not like to be laughed at. He felt like a very much abused boy, and made up his mind to go to bed early every night and eat oatmeal porridge and milk every day, so he would grow fast and get to be a man, and then he would buy three or four pairs of spectacles for himself, and cry all he wanted to, without having people laugh at him and call him a cry-baby.

After a while Fritz commenced snuffing amongst the wood, as if he smelled a mouse, and Johnny went over and pulled out some of the sticks to try to help him find it. He pulled out a good many, and Fritz pawed, and sniffed and barked, but they did not find any mouse, and Johnny soon got tired and went into the garden. On the side next Mr. Cook's place a row of beans had been planted, and he looked to see if any of them had come up. He could not find any, and dug down into the ground with his fingers to see what had become of them. Some of the beans were sprouting, and Johnny put them back into the ground and covered them up.

Sarah Cook was getting parsley in the garden on the other side of the fence.

"What are you doing?" she called out.

"None of your business," said Johnny, rather coarsely.

"Well, you are not very polite. Did you catch a mouse in the woodhouse? You look as if you had been eating one," and she commenced to laugh again, and Johnny was glad when somebody called her into the house.

He thought when he got to be a man he would have a high board fence all around his garden, so people could not look in and see whether his face was dirty or not.

When he went into the house again his sister was sitting by the window cutting something out of a piece of white paper.

"What are you making?" asked Johnny.

"I will tell you by-and-by," said Nelly.

"Tell me now," said Johnny.

"Go and wash your face," said Nelly, "and then I'll show it to you. Your face is awfully dirty. I won't show it to you till you wash your face."

Johnny did not like to wash his own face very well, but he was curious to see what Nelly was making, and he knew she always did as she said she would, so he went into his mother's bedroom and poured out some water into the wash-bowl and put a big piece of soap in it, and wetting one corner of a towel rubbed it over one side of his face, and went back to Nelly again.

"Oh, your face isn't half washed," said she; "look in the glass and see. You must wash it all over, the way mamma does."

Johnny went back, and managed to get most of the dirt off the next time, but he left on so much soap that his face shone as if it had been greased. Nelly laughed a little when she saw him, but said she guessed that would do, and gave him what she had been making. It was a pair of paper spectacles, and they looked quite nice. Then she cut out some little trees and chairs and tables and other things for him to play with; and Johnny made up his mind to have Nelly live with him always after he got to be a man, but there was one person he did not wish ever to invite into his house, and that person was Miss Sarah Cook.

A FOR took a seat in a railroad car behind a young lady, but, on perceiving she had a dog, he moved off with an air of trepidation. "Don't be afraid," she said, with a reassuring tone: "Jip won't bite you; he doesn't like veal."

As they passed a gentleman whose optics were terribly on the bias, little Dot murmured: "Ma, he's got one eye that don't go."

GOOD HEALTH.

Recipe for Hydrophobia.

EDITORS PRESS:—As dog days are here again, a recipe for hydrophobia will not be amiss, and here is one that I have known to cure. Take one-half ounce of "henbet" or chickweed and one quart of strong beer; put them in a new earthen dish or vessel; boil it down to a pint, stirring it all the time. Then put in half pound of honey and let it boil right hard. Then strain through an old white cloth, that has never had any grease about it, into an earthen dish that is perfectly clean—then let it stand until cold—enough to put in a bottle. The preparation is then ready for use. Take it in three doses—one dose each day before breakfast. If there is any poison in the system, it will make the patient deathly sick for a little while, but if the bite was harmless it will not affect them more than water. For a child under 12 years old, a gill will be enough. The patient must not eat anything for three hours after taking, and take it on an empty stomach, and eat no sauce that is greasy nor do any work for two weeks. The "henbet" wants to be cut when there is no dew on it, and cut it about the 20th of June, as it is then ripe enough. The plant has a small viny stalk with red flowers, somewhat resembling the henbane, the pest of the gardens in the East, but that has white flowers.

READER.

Etna, Cal., July 28th, 1878.

The Safety in Fresh Fruits and Vegetables.

Julia Colman, in her hygienic writings for the *Phrenological Journal*, says: Much more frequently than we suspect, do we allow our food to approach the boundary line of poisonous decay. Cases can be quoted to show that moldy bread and moldy cheese are poisonous. The warmed-over beans and potatoes are not so good as the fresh, because they have lost some of the qualities that recommend them for food. Warm them the second time and they are worse yet. In fact, freshness is a much more important quality in our food than we have been in the habit of supposing. We allow that decayed fruits and wilted vegetables are not wholesome food, but we are slow in learning where to draw the line. We understand in the case of animals that vitality preserves from decay, and we note when an animal is alive and when it is dead, and we should do the same with vegetables, though for a different purpose. The vitality of vegetables is something which can enter into harmony with ours, can feed and nourish it. We do not always need to kill it; we might perhaps with propriety say that we transmit it into our own vitality.

The vitality of fruits is easily ascertained, for when they die they begin to decay. Sometimes a local injury causes a local decay, but the latter soon infects the whole structure, and this is one reason why a partially decayed fruit is wholly unfit for food. Many fruits retain their vitality for a long time after they are removed from the stem on which they grew. There are many varieties of apples, pears and other fruits which do not even mature until some months after their proper period for harvesting, but the vitality is definite enough. Kill that by heat or frost, and there soon follow changes of structure, indicating plainly enough the loss of vitality. Not only is their appearance more attractive when alive and their taste more delicious, but their refreshing and satisfying effects are much more evident. They bring a feeling which is better than stimulation or exhilaration.

ANTISEPTIC PROPERTIES OF BORAX.—According to the *Lancet*, at a recent meeting of the Academy of Sciences of Lombardy, G. Polli reported the results of numerous experiments in which beer, meat, blood, eggs and urine were treated with boracic acid and borax for 30 days during the summer time, and were found still to retain their freshness and to present no traces of fermentation having taken place in them. In experiments, on the other hand, without the addition of the salt, but in some cases with the addition of sulphate of soda, the fluids passed into a state of complete decomposition in the course of 15 days. The energetic disinfecting power possessed by boracic acid and borax, and the facility with which these substances can be absorbed into the economy, led Polli to recommend their use in diseases in regard to the infectious nature of which no doubt exists, or in which septic conditions readily arise. He adduces several examples in which the febrile conditions of tuberculosis underwent diminution. No benefit was obtained by Prof. Visconti from experiments made with these remedies in malaria, though other observers have arrived at a different conclusion. In chronic cystitis, the muco-purulent discharge quickly diminished and even altogether disappeared in the course of a few days, and rapid improvement occurred in bad cases of suppurating wounds when they were applied externally. The dose recommended by Polli is 75 grains of boracic acid and 150 grains of borax per diem.

DOMESTIC ECONOMY.

Yeast that Will Start Itself.

EDITORS PRESS:—People living in the country several miles from town, or from other ranches, sometimes get out of yeast and are obliged to use the condensed yeast cakes, "sour dough" rising or other soda mixtures, which are very unwholesome. To such the following recipe will be quite acceptable:

Boil a handful of good hops half an hour in two quarts of soft water; strain and let the liquid cool to new milk warmth; then add one tablespoonful salt, one-half cup of white sugar, and one-half pound, or small saucerful of flour; beat well together and set in a warm place; let it set three days, stirring frequently. The third day boil one and a half pounds of potatoes, mash and add to the mixture and let stand until next day, when it is ready for use.

Always stir well before using. One cup of yeast will make four common-sized loaves.

Excellent Sponge Cake.

Four eggs, two cups of loaf sugar rolled fine, one and a half cups of flour, and a little salt, mixed with the flour. First beat the yolks and one cup of sugar well together, with cold water enough to dampen the sugar; next beat the whites to a stiff froth. If by this time small bubbles rise on the mixture of yolks and sugar, it has been beaten enough; if not, beat more. Put in the rest of the sugar and then mix all together with a knife, adding more water if too thick. Cover and bake in a hot oven 20 minutes without opening the oven door. Then uncover quickly and leave five minutes longer to brown.

L.

River Bank Fish Cooking.

The "American Anglers' Book" gives the following directions for a hasty fish meal at the side of the stream: Select the smallest fish; those under nine inches are best; scour them well in sand, wash them clean and open them, but allow no water to touch the inside, as the blood and natural juices of the fish should be retained as far as possible; cut off the heads, score them (not too deeply) and pepper and salt them well inside and out. Cut one or more branches (sweet birch is best), with as many twigs or shoots on them as is required for the number of fish to be roasted, and stick a fish on each twig, either end foremost, running the twig along the upper side of the backbone, and hold them to the fire. By keeping an eye on the inside of your fish, it is easy to ascertain when they are done. Always take them off with a twist or wrench, to disengage the twig from the flesh, and lay them on a hot stone, buttering them while warm.

A Rustic Bake or Steaming.

In baking or steaming them under the coals and ashes, do not cut off the heads, but season them, and then take a piece of strong thin paper, and, smearing it thinly with butter, roll a fish in it, and then envelop it in five or six piles of coarse straw paper; after saturating each fish so encased in the stream, lay them side by side in a bed of hot ashes and coals; cover them up and give a minute to an inch; that is, if a fish is 10 inches long, give it 10 minutes, and so on. When you uncover them, they can be removed from the ashes by inserting the forked end of a long stick beneath and drawing them out. When you take them out of the paper, unroll them carefully on a flat, hot stone, open and butter them to your liking, and, above all, regard the head as a precious morsel; it contains much that is glutinous and fatty; in the language of Father "Izaak," "they are too good for any but honest anglers."

A Sumptuous Dinner.

Of course it will occur to the diner-out that a larger fire is necessary in baking than in roasting, and that it should burn down well in order to produce the requisite quantity of coals and ashes. Trout of from nine to 12 inches are best cooked in this manner. Though there are other ways of cooking them on the stream, as frying on flat stones which have been heated in the fire, or "planking" large trout, none can compare with this mode; if there is an objection to it, it is that one is never satisfied afterwards with the taste of trout cooked indoors. Old anglers have confessed, after a roast or bake, that they had missed much by not before adopting this simple way of providing a sumptuous dinner; and that all indoor methods, with their epicurian appliances, were not to be compared with roasting or baking under the ashes. The latter is the surest mode of retaining the natural flavor and sweet juices of the fish.

Pickles and Catsup.

EDITORS PRESS:—Please give through the RURAL PRESS the best recipe for making tomato catsup and cucumber pickles.—GEO. H. LUTHER, Nordhoff, Cal.

We have given from time to time recipes for these articles, and we should prefer now that our readers should describe methods which have given them best success. Will not some RURAL housewives give us the rules which they know to be good?

PIGEONS, BOILED.—Clean your pigeons thoroughly; trim the legs under the wings; dredge them and put them in cold water, boil very slowly half an hour; dish them up, pour over them melted butter; drawn butter and parsley is very good over them.



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SAN FRANCISCO:
Saturday, August 10, 1878.

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NEW ADVERTISEMENTS.

Abel Stearns Ranches, Los Angeles Valley, Alfred Robinson, Trustee, S. F.; Rupture, California Elastic Truss Co., S. F.; "General Custer's Death Struggle," Pacific Art Co., S. F.; California Furniture Manufacturing Co., S. F.; To Cattle Breeders; Rams For Sale, Mrs. E. M. Connell-Wilson, Elk Grove, Sacramento Co., Cal.

The Week.

Harvest still engrosses the attention of the grain grower. Miles on miles of sheaves lie over the ground beneath a faithful sky, and thousands of stacks, without a thought of thatch or shed, await the coming of the thrasher, as he creeps along from setting to setting across the landscape. Long will be his season this year. In many parts the stacks are so many and the threshers so few, that the early rains may slack his belt and send him to shelter. Often as is remarked the favoring character of our harvest climate, it is still a theme worthy of praise. The growth of a country warehouse, which we have been watching well, shows the fact. In California, a warehouse grows naturally upward. First, the foundation, then the sills and sleepers. The flooring covers the sleepers, while the studs are enclosing the sides. As fast as the floor is laid on, comes the sacks of grain, and last of all, when its treasures of grain are well nigh all stored, the roof creeps over the rafters as leisurely as the opening of a flower. Not so at the East. There, a warehouse leaps into form with nervous haste, and with a din of all the hammers in the neighborhood. Almost before its feet are well planted on the ground, there is an abnormal growth of roof. When this stands out against the sky, almost without visible means of support, there is a breathless rush for the siding, and, if the sky be dark, the boards are apt to be nailed on first near the roof, and the covering grows downward, like the sheathing of a boy, passing from roundabouts to long coats. Peace there is none until the building is "enclosed." Then comes the bracing and the flooring, and happy are they if the driving storms have tarried till this time.

Hops in Hops.

Of hops we sing and of beer; hops bright, golden and fragrant; beer light and foaming, bringing heaviness to the heads and lightness to the pockets of its votaries. We choose to speak of hops because they are an agricultural product, the growers of which now look to us for facts concerning the probable extent of the incoming crop.

"What can you tell us of this year's hop production on this coast," writes a correspondent from Hopland, Mendocino county. "In our county we shall have but two-thirds of a crop. There are 40 acres on the Indian reservation which will not be picked. There are 75 acres around Hopland, 40 acres having been plowed up." In reply we can say that the percentage which Hopland will harvest this year, will, according to the judgment of those best informed, apply to the whole product of the coast; that is, the production promises to be about two-thirds as great as last year. This is the estimate made by those who are large receivers of hops in this city, and who have advice from all the producing regions of the coast. The crop of 1876 was about 16,000 bales; that of 1877 about 14,000 bales, and that of 1878 is placed at from 8,000 to 10,000 bales. This is, of course, an early estimate, and may be inexact; but it seems warranted by the depth of sight which one can get into the millstone of the future. It is fair to expect that this year's crop will be unusually good in condition, because the decrease comes not from cause affecting growth, but from decrease in the acreage. Having fewer hops to care for, it is believed better efforts can be made in picking and curing those which will be gathered. It will be well if this should be the case, for, in the reduced production which will be experienced all over the country, as well as on this coast, the price will be much better than last year, and he will profit most by the advance who shows the best samples.

We have said that the reduced production will come from decreased acreage. In the other parts of this State, as in Mendocino county, there has been considerable plowing up of the roots; there has also been scanty cultivation enough to keep the roots alive without gathering a crop. In Alameda county, we learn that the hops have been nearly all plowed up, 80 acres being abandoned. Sacramento and Merced counties are credited with one-half a crop this year. The Mokelumne and Lone valley yards will give two-thirds of a crop. The Napa yards are reported looking well, but the amount sent to market will be one-third less than last year. Lake county, it is believed, will market but one-half a crop. The Santa Clara yards also look well, but there will be but a partial gathering. In all parts, where hops are grown in this State, those yards which have been cultivated for a crop, look well, but in all there has been a disposition to reduce the production. Oregon has also reduced her amounts because of last year's serious reverses. This year there has been some trouble by an untimely drouth, as the report goes. Washington Territory reports an average crop, and of very good quality. Enlarging the circle of observation, we find reports that the Wisconsin crop has met with serious reverses, and there is prospect of reduced production in New York. There is also possibility of an English lack coming in to help the price. Reviewing all the facts, as now reported, there seems reason to expect a full remunerative value for all efforts made to put this year's yield upon the market in first-class condition.

As the crop is coming to maturity, it is interesting to review the causes which have effected the low price which has prevailed of late. It has been currently reported that brewers have learned to do without hops, and have substituted other and dangerous substances in their place. On this point we have the contrary facts and opinions of a man who has long been practically interested in the growth and sale of hops, Mr. W. A. Lawrence, of Waterville, New York. He attributes the low prices to several causes:

1. To an increase in the supply out of all proportion to the increase in the demand. The census reports show that the hop crop of the United States was, in 1840, 6,196 bales; 1850, 17,485 bales; 1860, 54,960 bales; 1870, 127,283 bales. Last year the crop was estimated at not less than 200,000 bales (of 200 pounds each) of 40,000,000 pounds. These figures show the crop doubling about once in 10 years, while the consumption of beer has made no such increase, and for the past five years of hard times has remained at very nearly the same figures each year. Last year the quantity of beer made was 85,000 barrels less than the year before, and some 300,000 barrels more than in 1875. Last year's product was a little over 9,000,000 barrels, requiring not more than 20,000,000 pounds of hops, while our crop of hops was not less than 40,000,000 pounds. Here were 20,000,000 pounds of hops surplus. Hops soon lose their strength and flavor, and the most of the crop must be sold the year it is raised. It is easy to see, in this state of things, the chief cause of low prices.

2. The public taste continually tends toward what is called "present use" beer instead of the old-fashioned "stock" ales and lager. The "stock" beers, brewed six months to a year be-

fore being sold, require at least a pound of hops more to the barrel to help preserve the beer, and to allow for the precipitation of the hop, and consequent loss of the hop flavor and virtue. Thus, in the change from "stock" to "present use" beers, there has been a saving to the brewers of 4,000,000 pounds a year, or about one-fourth of the entire consumption. And yet for the taste, and for health, the "present use" is as well hopped as was the "stock," and contains only about one-half the amount of alcohol.

These interesting facts concerning the manufacture of beer in this country, shows that it is well that the hop production will be reduced this year.

QUERIES AND REPLIES.

California Opium.

EDITORS PRESS:—I herewith send you a specimen of opium; two gatherings from 100 pods. About two-thirds of it was from first gathering. The second gathering I left 48 hours instead of 24 as at first, consequently it is very dark. I also send you a seed-pod, measuring this morning while fresh, nine and a half inches in circumference. There is so much juice in the pods that it drops all over the leaves as you will see by specimens sent. I also send you two leaves of the flower to give you an idea of the size of the flowers; they grow splendidly and stand about four feet high.

I see that the flowers attract all the bees in the neighborhood. Will the honey made from the poppy bloom be of a good quality?

I would like to have the quality of the opium tested and know the result; also an estimate of what it would pay per acre.

I received the cotton seed all right. I planted them July 12th and will send specimens and result.—R. M. DUNGAN, Santa Ana, Cal.

The box in which the specimens were sent had become badly demoralized in the mail-bags and the parcel of lighter colored opium which our correspondent mentions was not received at all. Perhaps the Chinese expert in the post-office "catches him." The seed-pod is a splendid one. The parcel of dark opium was about as large as a hazel nut, and seems of good quality. It is about the color of the opium usually found in the market. Mr. J. R. Gates, one of our leading wholesale druggists, and who has examined a good many specimens of California opium, reports this one the best he has seen in odor and consistency. Like other unusual articles, it has, however, no standard, and no dealer who has an established line of trade could afford to take the risk of supplying his customers with it for fear of the chances of dissatisfaction. We will send the specimen to Prof. Hilgard at the University, in case it may serve him for some tests. As we have said before, and as we still believe, the best and most direct way to introduce the California product would be to open correspondence with some of the leading manufacturers of morphine at the East, and get them interested. Then we would produce as much as convenient in one season and consign it to them, trusting them to indicate its practical value to them, and to furnish information of how it compares in value with the material they are importing in large quantities. The leading morphine manufacturers in this country are Powers & Wightman and Rosengarten Sons of Philadelphia. Either or both of these firms would doubtless treat the subject fairly if there were prospect of enough being produced to warrant their attention. Prof. Hilgard will doubtless be pleased to determine the percentage of morphine, and this would be a valuable point to know at the outset; but this would not avail so much with dealers as the approval of their superiors in their own line, the leading chemical manufacturers. We should by all means open correspondence with them.

Concerning the quality of honey from poppies we have not data for giving an opinion, although it is doubtless in existence. There is, it is well known, such a thing as honey from certain flowers possessing undesirable and even fatal qualities. Whether poppy honey is of this class we do not know. Who will tell us?

We are glad our correspondent will make a trial of the Sea Island cotton. We have still a little seed to send to those enclosing a stamp for postage.

Pear Scale Insect—Peruvian Guano.

EDITORS PRESS:—Enclosed I send you a section of pear shoot infested with what is commonly called the scale louse. It is destroying some of our finest orchards, and if not checked, will continue to do so until all are gone. I have spent some \$400 on my orchard, and think I have done some good.

I want to inquire what are the principal ingredients of Peruvian guano, and where it can be obtained in your city, and at what cost per ton?—JOHN BRITTON, San Jose, Cal.

The twig received is evidently infested with a scale insect. It is, however, a different species from those commonly found upon the pear in the Eastern States. The microscope showed that the scales, though very abundant, were all deserted by the young insects, which had evidently hatched beneath them. Therefore we cannot tell definitely concerning the species. We are glad that attention has been called to the insect, and as our correspondent thinks his destructive measures have been at least partially successful, will he not give our readers the benefit of his experience as to means and methods?

The composition of Peruvian guano varies somewhat, as shown by the results gained by the many analyses which have been made during the last 75 years. The Peruvian guanos belong to the class called "ammoniacal guanos," because of the presence, to a greater or less extent, of ammonia-producing compounds. Thus they are distinguished from the

"phosphatic guanos," in which ammonia compounds are absent. Phosphatic guanos are obtained from the West Indies, South Carolina and elsewhere. To show the general composition of Peruvian guano, we cannot do better than give the average of analyses of nine cargoes of Guanope Island guano imported at New York, and analyzed by Prof. C. F. Chandler and F. A. Cairns. The average was as follows:

Ammonia.....	1.38
Phosphoric acid (soluble).....	6.09
Phosphoric acid (insoluble).....	8.24
Water.....	19.72

Peruvian guano was advertised last fall in the PRESS, but there being no demand for the material, it was shipped to New York city. If there is some now for sale, it should be advertised.

Veterinary Points.

EDITORS PRESS:—I see in this week's RURAL PRESS a statement that "poll evils" can't be cured without a surgical operation. I beg to differ a little. They can be cured very easily by letting them come to a head and break. As soon as it begins to run it can be cured. I will send the material that will do it. If any one has a horse with poll evil, running, I guarantee to cure it. To cure that mule of Mr. Croft's, I would take castile soap and warm water, and wash him all over, and let him stand in the sun to dry. The medicine I would apply would be four ounces cream of tartar, four ounces sulphur, two ounces gentian root. Grind the root very fine; then mix one tablespoonful of the preparation twice a day in chopped feed. Then take sulphur, six ounces, sperm or train oil, one pint, spirits of turpentine, three ounces. Make a liniment of them and put it on where the mule rubs himself.—R. S., San Jose, Cal.

Our correspondent makes a promising statement concerning poll evil, and then forgets to add the most important part, namely, what the material is which he would use. Of course, if he intends to serve the public by announcing his success, he must not hold back full information of the means employed. It is laid down by the best veterinary authorities, as a fact, that, despite the many treatments which have been proposed, the use of the knife, just at the proper moment, by a skillful operator, is the only certainty of curing poll evil. The prescription for the mule is received with thanks. It seems a good one.

Curing Tobacco.

EDITORS PRESS:—Will you give, through the RURAL, the best method of curing tobacco?—GEORGE H. LITREN, Nordhoff, Cal.

We confess we do not know the best method under the peculiar conditions. The Culp process, patented by Mr. Culp, of San Felipe, Santa Clara county, is the one about which greatest hopes have centered, and, as we said last week, the *Alta* believes it a success. If our querist should write to Mr. Culp, he will doubtless obtain full particulars. There are other processes claimed to be successful by tobacco growers in different parts of the State. We have mentioned several of them in our Agricultural Notes, during the last few months. We do not know what their methods are. We should be pleased to receive for publication descriptions of all methods believed to be productive of good results in this State, and then readers can judge them and test them by experiment.

Inquiry for Government Land.

EDITORS PRESS:—There is probably much land still open to pre-emption and homestead among the foothills suitable for fruit-raising. If some of our subscribers in San Luis Obispo, Ventura, or other coast counties, living in the vicinity of government lands, would give the information through the PRESS, they would confer a favor on many strangers in the State.—J. M. M., Orange, Cal.

We have always encouraged statements of this kind. Any one knowing of good land subject to pre-emption, and desirous of building up neighborhoods by the incoming of settlers, will find us ready to print his account of the opportunities which may be found in his region.

Cestrum Dumetorum.

EDITORS PRESS:—Enclosed I send you a flower and leaf of a tree called by some the "tobacco tree," and by others the "cabbage tree." Can you give me the correct name? The tree is new to me. It looks like a weed until several feet high. I am told it attains its growth or height in one year, which is about 16 feet here. It suckers or sprouts out a great deal, and makes a good wind-break or hedge. The blossoms are yellow, about as large as a pencil, and about two inches long. The seed is very fine.—JAMES MORSE, Guadalupe, Cal.

Mr. W. G. W. Harford, director of the Academy of Sciences museum, recognizes the flower and leaf as those of *Cestrum dumetorum* (Schlecht). It belongs to the order of Solanaceae. The plant has been introduced into this State from Mexico.

Edison, the Inventor.

EDITORS PRESS:—Will you please give me, in your next issue, the address of Mr. Edison, the inventor of the telephone?—AN INQUIRER, Independence, Cal.

Mr. Thomas A. Edison is now in this State on a flying visit, having come West to test a new instrument of his called the tasimeter, during the eclipse. He has gone to the Yosemite valley, and will start thence homeward, we presume. His residence is Menlo Park, New Jersey.

That Fossil Ivory.

EDITORS PRESS:—The "fossil ivory" described in your issue of July 27 appears to have been the dorsal spine of some gigantic shark of which numerous remains of teeth are found in some parts of California. If not that it probably belonged to some other fish; many of those of the secondary period having had them.—J. G. COOPER, Haywood, Cal.

LECTURE ON ORANGE CULTURE.—In answer to our request, Mr. Thomas A. Garey, of Los Angeles, has sent us a copy of the lecture on Orange Culture, which he delivered at Central Colony, Fresno, on Saturday, August 3. We shall, at our earliest opportunity, present the leading parts of the lecture for the edification of our readers.

Preparation of Raisins for Market.

As the raisin curing and packing season approaches, there is nothing more important to urge than the proper preparation of the product for the market. In a recent issue, our Riverside correspondent related his experience and observation of California raisins in an Eastern State, and how he saw an article of which he was ashamed. This will not do. If our raisins will not pay for packing well, as well as the competing article from Spain is packed, it will not be long before it will not pay to pick the grapes. We have to make a market in the face of a rival who has already possession of the ears of the merchants and the tastes of consumers. These cannot be won unless we show an ability and disposition to win on style and quality. It is the custom in preparing the best Spanish brands, to cull the raisins carefully, and all the packers have receptacles for the poor clusters and poor berries, and these are never permitted to go into the "layers" for export, but are kept at home and used as best they may be. We do not believe in a practice of farm economy which furnishes the table only with articles which are too poor to sell, but in the matter of raisins it is plain that the poor clusters and parts of clusters should never be allowed to go into the boxes which are to be marketed. It would be more profitable, if we do not feel like consuming them at home as do the frugal Spaniards, to throw them to the hogs, than to offer them for sale mixed with the choice raisins.

The observation of our Riverside correspondent is affirmed by a letter which Messrs. J. T. Warren & Co., leading foreign fruit dealers of Cincinnati, write to the *Southern California Horticulturist*, evidently on invitation of our friend Gen. Shields, who is now in the East. They have received several lots of California raisins, and their experience with them leads to the following remarks concerning them:

1st. That the product should be carefully graded.

2d. The packing should be proportionately artistic; by which we mean that all but the inferior grades should have the raisins in bunches, packed in layers, four to the box; between each layer, and on the top a neat lithograph picture, attractive and suggestive of either local scenes or the grape culture. This packing should be more and more artistic as the grades advance in value. Boxes should not exceed 20 pounds in weight.

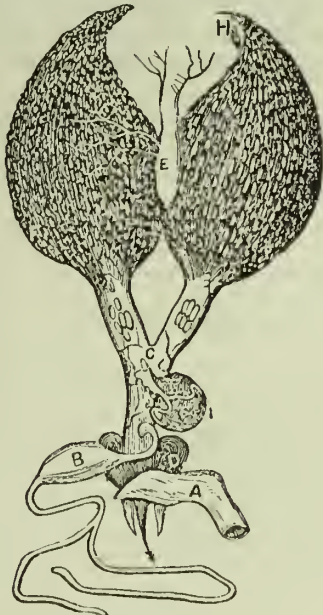
3d. All the small inferior fruit off the bunches should be packed in a cheap, neat style, in packages not to exceed 50 pounds in weight.

4th. The keeping quality of the California fruit, from experience, is superior to the imported fruits; but the raisins fall short in the question of seeds, which are very large in the California fruit. It strikes us that a grape

Glimpses at Anatomy.

We give on this page two glimpses at parts of the anatomy of two of our agricultural servants, the fowl and the bee. They are parts which are seldom seen, and therefore may add to our knowledge. The roof of a fowl's mouth can be easily seen if one looks for it, but is seldom looked for because the first cut in our dissection of a fowl generally begins across the neck and proceeds downwards through the layers of "white meat," and ends in the muscles of the "drum-stick." In fact, we believe there are as few of us who see the roof of a fowl's mouth, which is easily examined, as there are who contemplate the ovaries of a queen bee, which require careful dissection under a microscope to discern them.

Our glimpse at the anatomy of the fowl is



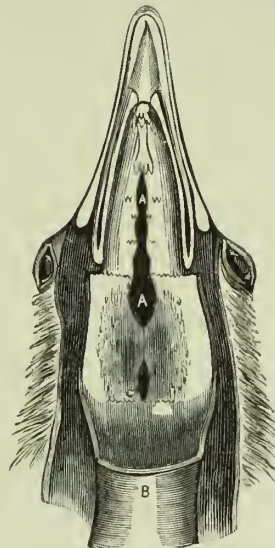
THE OVARIES OF THE QUEEN BEE.

gained from the drawings of Mr. C. J. Maynard in the *Scientific Farmer*.

All extant birds differ from most mammals in having no true teeth. The elongated bones which form the jaws or mandibles, are simply furnished with a horny sheath having straight, sharpened edges; but in the example before us no adequate means are provided by which the food can be masticated. Thus, although fowls, by constantly pecking at animal and soft vegetable substances may tear them into small

The tongue is a horny, sheathed organ in this case. Although the hyoid bones which support the tongue are encased in muscle, it is capable of but little extension. At its base is the superior larynx, also provided with reversed papillae, some of which guard the entrance to the windpipe or trachea, shown at B in the engraving. The food in its passage to the gullet or oesophagus, becomes imbued with a kind of mucus secreted by two glands, the outlet of which is at C. These are the sole representatives of the salivary glands of mammals.

Another glimpse at anatomy may be had through the microscope, if one is skillful enough to dissect out the ovaries of the queen bee. The engraving on this page shows them as drawn for the new "Beekeeper's Text Book." The ovaries consist of a pair of organs, represented by FF in the cut. Each is composed of tubes full of eggs in every stage of growth, which start from near the apex H and open into one duct on each side, as shown in the cut. Each egg passes through a common channel C, on its way to the cell, passing by a little sac I,



ROOF OF MOUTH OF A FOWL

called the "spermatheca," from which all eggs destined to become workers are impregnated. Adjacent organs playing some part in the scheme of reproduction are shown at A, B, D and E.

A young queen seems incapable of fertilization after she is three weeks old and lays only drone eggs. She is generally fertilized at from five to twelve days of age, in which act this sac I is filled with seminal fluid from the drone. It is now generally believed that the queen is

The East River Bridge.

We illustrate herewith the East River bridge, connecting New York city with Brooklyn, as it will appear when completed. The labor on this bridge was commenced, on the Brooklyn side, on January 3d, 1870, upon the plans of the chief engineer, John A. Roebling, of Trenton, N. J. This gentleman, when he undertook this work, had already built two of the finest suspension bridges in the world—at Niagara Falls and at Cincinnati—and now he has added to his laurels another "wonderful monument of the engineering skill of the age." Soon after the completion of the plans Mr. Roebling died, and the work has been carried on by his son.

This bridge, crossing so great a water-thoroughfare as the East river and joining cities of such large traffic as New York and Brooklyn, required to be made high above the water so as not to interfere with navigation, and at the same time very strong, so as to bear the immense vertical strain which will inevitably come upon it, as well as the great lateral strain arising from its high and length of span. It will be seen from the following description how Mr. Roebling's plans are calculated to produce a bridge that will do the work assigned to it, and yet offer no impediment of any kind to river travel.

In the first place, there are no obstructions whatever in the river, the only two piers used in the bridge being allowed to stand not even in the water near the shore, but high and dry on the shores themselves. These piers are 280 feet high, reaching above the tallest spire of New York. The upper 150 feet of this pier is for the attachment of the cables, the floor of the bridge being only 130 feet high. There are two arches in each pier, affording entrance to the bridge. Each archway is 32 feet wide, giving ample room for a railroad track, a carriage-way and a sidewalk. Each arch is 120 feet above the floor. Each pier contains 70,000 tons of granite. They were built by sinking huge iron-shod timber caissons, hollow and water-tight, to permit the laborers to excavate the foundations. On the Brooklyn side no suitable rock for a foundation was found at a reasonable depth, and so the caisson remains with the pier upon it. The distance between the piers is 1,620 feet.

The bridge proper will weigh 3,600 tons, or adding the weight of the maximum number of foot passengers, railway trains, carriages, etc., 5,000 tons. It is supported partly by four large cables, made of parallel steel wire into a bundle nearly one foot thick. The cables are anchored in solid walls on the New York side, 1,337 feet from the pier, on the Brooklyn side, 837 feet. This gives the total span of the suspension bridge proper 3,794 feet. Beyond these



EAST RIVER BRIDGE, CONNECTING NEW YORK AND BROOKLYN.

should be carefully selected from year to year, until this point can be reduced to a minimum.

These propositions are worthy of consideration. Some are of prospective and some are of immediate application. The suggestions concerning packing can be taken advantage of at once. At all events the general idea of separating the poor from the good should prevail from the start in every raisin vineyard in the State.

ON FILE.—"Apple Scale Insect, Etc.," E. B.; "Treatment for Mr. Croft's animals," W. G. P.; "California Sumac," I. A.; "Sacramento County," A. C. K.; "Preparing Plaster Casts, Etc.," G. E. C.; "Pruning," M. P. O.; "Ventura County," B. W. C.; "Santa Cruz and Northward," C. F. T.; "Life's Shadows," W. W.

pieces, yet it must swallow these as well as hard grains, without further change, when they are once taken into the mouth.

Upon examining the interior of the mouth, we find that the upper portion is provided with a thick, horny skin, divided near the center by a longitudinal slit, having scalloped edges. This may be seen at AA, where the lower mandible has been removed, and the drawing made while looking directly down upon the head which was placed upon its back. This is the nasal opening, and is so narrow that there is little or no chance for any substance taken into the mouth entering the cavity above. It is notable that the roof of the mouth is provided with small flexible projections which all point backwards. These papillae are arranged in transverse rows and groups, and in absence of any well-developed muscular apparatus for swallowing, greatly aid in causing the food to take a downward course.

able to fertilize the eggs as they pass the spermatheca, at her option.

SAN MATEO, SANTA CLARA, AND SANTA CRUZ.—Mr. A. C. Knox will visit the counties named in the interests of the Press during the coming weeks. Mr. Knox is the veteran in our list of agents, and a trustworthy and estimable man. We bespeak for him a cordial greeting from our friends, and a recommendation to all friends who should be numbered among our readers. We trust he may be plentifully supplied with useful facts and experiences to record in his letters, and find quick response to his invitations in a pecuniary line.

BUBACH NOT BUCHU.—The *Chronicle* makes the queer mistake of investing Mr. Milco with the culture of buchu plants. Does the error come from familiarity with Hembold's masterpiece?

anchoring points on either side the bridge is approached over arched masonry so high as not to interfere with the houses and streets. The cables are so arranged as to afford resistance to horizontal as well as vertical strain, thus preventing danger from gales. But not all of the vertical strain comes upon the cables; it is shared with a number of straight stays extending from the top of each pier toward the bottom of the bridge, so that, to quote from Mr. Roebling, "if the cables were removed, the stays would hold the bridge—only it would sag in the middle."

The bridge with its approaches extends far into New York city and Brooklyn, having an easy grade on the outside of the piers, and affording a very safe and in every way convenient substitute for the old ferry boats.

THE New Orleans Board of Health report 24 new cases, and seven deaths from yellow fever,

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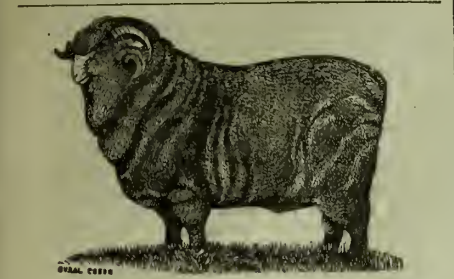
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Great and unusual attractions will be presented to visitors. Mining, Agricultural and other machinery will be in motion. Pacific Coast Manufactures, Minerals and products of the soil will be fully represented, beside many new and interesting novelties never before exhibited on this Coast. The

ART DEPARTMENT

Will be under the supervision of the San Francisco Art Association, a guarantee for excellence and completeness. Local Art will be specially represented, as also works of noted foreign artists, selected from the private galleries of this City. The

HORTICULTURAL GARDEN,
So popular heretofore, will be made still more attractive this year by the addition of many new features.

THE MUSIC.

Each afternoon and evening a first-class instrumental concert will be given by the best soloists and accomplished musicians of this City, with a daily change of programme of the best and most popular music.

No expense or pains will be spared by the Management that will add to the comfort or convenience of visitors. Applications for space or information can be obtained from the Secretary, at the office, 27 Post street.

IRVING M. SCOTT, Pres't.
J. H. GILMORE, Supt.
J. H. CULVER, Sec'y.

Grangers' Bank of California,
42 California Street,
SAN FRANCISCO CAL.

Authorized Capital - \$2,500,000,
In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

OFFICERS:
PRESIDENT.....G. W. COLBY.
MANAGER AND CASHIER,
ALBERT MONTEPELLIER.
SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

NEW MUSIC! NEW MUSIC!

At Gray's No. 105 Kearny Street,

On receipt of the amount in postage stamps, any of the following pieces will be mailed, post-paid:

- BAEY MINE, (Song).....Smith, 35 cts
- BABY MINE, (Schottische).....Stuckenholz, 35 cts.
- ENNETT'S LULLABY, (Piano Solo)....Far West, 35 cts.
- LITTLE TORMENT, (Schottische).....Far West, 35 cts.
- THE SNOW LIES WHITE, (Song).....Harriott, 35 cts.
- ALCANTARA, (Galop).....Chauncey, 75 cts.
- GOLDEN OPHIR, (Galop).....Yanke, 50 cts

Send for complete Catalogue of Music and Descriptive list of the



E. DETRICK & CO.,
GRAIN BAGS,
FLOUR BAGS,
Awnings, Tents, Twines.
119, 121, 123 Clay Street, S. F.

Farmers and Others Attention!

If favored with your orders we will furnish you with first-class farm hands of any kind you may wish. We are men of experience and know how to select good help. We have also constantly on hand, Blacksmiths, Milkmen, etc., and in short, skilled and unskilled labor of all classes, male and female. Try our agency before sending elsewhere. French, German and Scandinavian spoken by the proprietors.

C. R. HANSEN & CO.,
New Employment Office, 626 Clay Street, next door to Frank G. Edwards' Carpet Store.

Fluctuations of Prices for 15 years in the San Francisco Wheat Market---Monthly Quotations from January 1st, 1864, to June 29th, 1878.

		1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.
Jan...	HIGHEST.	1 55	4 37½	2 20	1 80	2 75	2 05½	1 70	2 60	2 52	2 15	2 30	1 70	2 00	2 25	2 35
	AVERAGE.	1 45	4 25	2 20	1 77	2 68	2 05	1 70	2 27	2 27	2 02½	2 15	1 50	1 92	2 15½	2 20
	LOWEST.	1 25	3 45	2 06	1 50	2 55	1 52½	1 40	2 00	2 20	1 75	2 20	1 60	1 85	1 85	2 05
Feb...	HIGHEST.	1 75	5 30	2 25	1 75	2 91	2 05	1 75	2 52	2 25	2 00	2 25	1 55	1 95	2 12½	2 10
	AVERAGE.	1 55	4 75	2 17½	1 71	2 90	1 90	1 70	2 40	2 17½	1 87½	2 02½	1 52½	1 90	2 07½	2 02½
	LOWEST.	1 25	3 90	2 10	1 37½	2 42½	1 52½	1 37½	2 25	1 52½	1 60	1 85	1 50	1 85	1 80	1 95
Mar...	HIGHEST.	2 40	5 25	2 25	1 94	3 10	1 95	1 70	2 50	2 25	1 98	2 00	1 62	1 92½	2 17½	2 07½
	AVERAGE.	1 85	5 00	2 17½	1 80	3 00	1 80	1 67	2 40	2 05	1 86	1 90	1 55	1 87½	2 08	1 90
	LOWEST.	1 60	4 75	1 88½	1 42	2 50	1 52½	1 27½	2 22	1 85	1 70	1 80	1 50	1 80	1 85	1 80
April...	HIGHEST.	2 50	5 25	2 25	2 22	2 70	1 77½	1 95	2 85	2 05	1 90	2 00	1 65	2 00	2 25	2 15
	AVERAGE.	2 25	5 00	2 17½	2 00	2 62	1 72	1 62½	2 53	1 82½	1 82½	1 90	1 62½	1 90	2 22½	2 05
	LOWEST.	1 70	4 77½	1 65	1 60	2 37½	1 32	1 47½	2 37½	1 60	1 75	1 80	1 60	1 75	1 85	2 00
May...	HIGHEST.	3 00	5 00	1 75	2 15	2 45	1 65	1 94	3 15	2 16	2 00	2 00	1 70	1 75	3 05	2 15
	AVERAGE.	2 67½	4 75	1 70	2 10	2 22	1 64	1 66	3 10	2 05½	1 91	1 80	1 67	1 67½	2 80	2 05
	LOWEST.	2 45	4 62½	1 62½	1 65	2 10	1 17½	1 47½	2 60	1 75	1 75	1 70	1 65	1 60	2 25	1 90
June...	HIGHEST.	2 75	5 00	1 77½	2 00	2 50	1 65	1 98	2 60	2 16	1 85	1 85	1 75	1 80	2 50	2 00
	AVERAGE.	2 60	4 75	1 70	1 77	2 22	1 57½	1 66	2 45	2 05	1 77½	1 77½	1 70	1 68	2 30	1 75
	LOWEST.	2 30	1 75	1 47½	1 55	2 00	1 32	1 60	2 30	1 82½	1 60	1 70	1 65	1 60	2 05	1 60
July...	HIGHEST.	3 62½	2 00	1 60	1 82½	2 30	1 80	2 10	2 45	1 82½	1 82½	1 80	2 00	1 65	2 25	1 60
	AVERAGE.	3 10	1 88½	1 60	1 72	2 00	1 75	1 96	2 22	1 62	1 74	1 65	1 75	1 48½	2 15	1 60
	LOWEST.	2 75	1 75	1 37½	1 50	1 80	1 56	1 70	2 21	1 42½	1 60	1 67½	1 67½	1 40	2 10	1 60
Aug...	HIGHEST.	3 55	1 75	1 60	1 87	2 00	1 85	1 96	2 45	1 66	2 12½	1 80	2 40	1 67½	2 30	1 60
	AVERAGE.	3 50	1 70	1 60	1 77	1 85	1 80	1 88½	2 27	1 50	2 02	1 60	2 20	1 56	2 25	1 60
	LOWEST.	3 25	1 60	1 40	1 65	1 52½	1 42½	1 57½	2 12½	1 25	1 72½	1 40	2 15	1 30	2 20	1 60
Sept...	HIGHEST.	3 65	1 96	1 65	2 15	2 05	1 77½	1 80	2 85	1 70	2 35	1 65	2 15	1 67½	2 40	1 60
	AVERAGE.	3 52½	1 87	1 45	2 10	1 96	1 75	1 75	2 37	1 62½	2 25	1 52½	2 02½	1 54½	2 35	1 60
	LOWEST.	3 30	1 70	1 25	1 75	1 70	1 42½	1 55	2 35	1 40	2 05	1 30	1 90	1 30	2 30	1 60
Oct...	HIGHEST.	4 37½	2 00	1 95	2 64	2 05	1 67½	2 05½	2 85	1 70	2 37½	1 67½	2 10	1 80	2 45	1 60
	AVERAGE.	3 90	1 96	1 60	2 42	1 96	1 66	1 87	2 65	1 60	2 26	1 47½	1 97	1 65½	2 40	1 60
	LOWEST.	3 60	1 80	1 35	2 17½	1 27½	1 20	1 67½	2 62	1 40	2 15	1 37½	1 90	1 30	2 35	1 60
Nov...	HIGHEST.	4 37½	2 12½	2 07	2 64	1 94	1 64	2 17	2 80	1 80	2 32½	1 62½	2 02½	2 12½	2 45	1 60
	AVERAGE.	4 25	2 05	1 80	2 53½	1 88	1 60	2 12½	2 75	1 65	2 27½	1 52½	1 90	1 74	2 40	1 60
	LOWEST.	3 00	1 75	1 65	2 16	1 42½	1 05	1 87	2 50	1 40	2 20	1 42½	1 85	1 40	2 35	1 60
Dec...	HIGHEST.	3 75	2 10	2 00	2 64	1 94	1 64	2 30	2 83	2 05	2 35	1 60	2 00	2 25	2 50	1 60
	AVERAGE.	3 52½	2 05	1 87	2 53½	1 85	1 58	2 20	2 67	1 93	2 28	1 47½	1 95	1 93½	2 45	1 60
	LOWEST.	3 25	1 94	1 75	2 50	1 62½	1 17½	1 87	2 42	1 65	2 17½	1 35	1 90	1 90	2 40	1 60

Notices of Recent Patents.

Among the Patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

SPARK EXTINGUISHER.—John Johnson, Bloomfield, Sonoma county. The invention is an improvement in that class of extinguishers used in the smoke-stacks of engine furnaces, and in which water is employed in various forms to kill or quench the sparks. It consists in the employment of a rose-sprinkler, having minute perforations, through which water is forced upward in the same direction as that which the sparks move. It also consists in a novel arrangement of the perforations and the top of the sprinkler, in order to prevent the minute jets from being reunited by the exhaust, so as to form large drops or streams of water, as this will reduce the efficiency of the extinguisher, besides throwing the water and soot over all the machinery near. In the dry harvest fields, where there is a rainless climate as in this State, if an engine is used it is extremely dangerous to the surrounding combustible material and water is almost always scarce, so that the amount used for an extinguisher of this class in addition to that required for an engine is an important feature. By the use of this device it is possible to perfectly quench the sparks with a small quantity of water. Various attempts have previously been made to use water to quench sparks and cinders before they leave the stack, either by throwing a thin sheet of water across the stack or by discharging the water into the exhaust pipe, or by some form of jet not specially intended for the purpose. These have failed, because of the tendency of the water to concentrate in larger streams or drops instead of being formed into a mist. Mr. Johnson's experience has proven that the water must be reduced to a most minute form before being discharged into the stack and then prevented from reuniting, and this apparatus effects it so thoroughly that no appreciable moisture is thrown out, but a dry mass of straw may be laid on top of the stack and it will not be ignited. It is a well-known fact that wet steam will quench the sparks better than a sheet or streams of water, and experience also shows that water in the form of sheets or streams will also impede the draft, so as to prevent keeping up steam with the damp fuel it is often necessary to use. With this device the water is practically so thoroughly united with the steam, which is often highly superheated, that it becomes practically a part of it and acts as wet steam. This effectually quenches the sparks and no bonnet is needed.

DERRICK.—J. D. Winters, Grand Island. This invention relates to certain improvements in wagon derricks, and consists in a novel method of attaching the foot of the derrick to the wagon, in combination with a device for raising the derrick from a horizontal to a vertical position upon the wagon. The arrangement is such that the derrick can be carried conveniently on the wagon and raised quickly and easily to a vertical position when desired.

UNLOADING NET.—J. D. Winters, Grand Island, Colusa county. This patent covers an arrangement for connecting and disconnecting the two parts of a netting, such as is used for unloading header wagons. The arrangement is extremely simple and strong, and the disconnecting apparatus obviates the necessity of using a spring or other device of doubtful strength and action.

Mechanics' Industrial Fair.

EDITORS PRESS:—At the request of the Board of Managers, of the Thirteenth Industrial Exhibition, to open in this city August 13th, 1878, we are about to make a display of Pacific coast products and manufactures. It will consist of cereals, fruit, wine, wool, minerals, ores, tobacco, silk, flour, woods, and other objects, natural or cultivated, of curiosity or importance. We invite the co-operation of all, and respectfully solicit those who have fine products to supply us with samples of them. Anything worthy of display in any of the above lines may be shipped to us, per Wells, Fargo & Co., who will carry them free of charge to the Mechanics' Fair building, Mission and Eighth streets, San Francisco. Credit will be given to each party contributing, and if any premium is awarded, it will be sent to the parties sending us the exhibit.

W. H. MURRAY,
Business Manager S. F. Journal of
Commerce Publishing Co.,
No. 414 Clay street, San Francisco.

SANTA CLARA FAIR.—We have received from Alex. P. Murgotten, Secretary, San Jose, a premium list of the Nineteenth Annual Exhibition of the Santa Clara Valley Agricultural Society. The list is neatly printed, and should be consulted by all who have worthy articles or animals to exhibit. The Santa Clara Fair is well known, and we doubt not this prosperous year will call out an unusually good exhibition of productions and manufactures.

PARTIES desirous of purchasing thoroughbred and graded Spanish merino sheep, are referred to the advertisement in another column of Mrs. E. McConnell Wilson.

DURING the year ending June 30th, 1878, vessels belonging to the port of San Francisco to the value of \$255,550 were lost. Lives, 82.

WOODWARD'S GARDENS were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a boa-constrictor have just been added. New stars are constantly engaged for the Pavilion exercises. Rates of admission as usual.

OCEAN VILLA, SANTA CRUZ.—Mr. Geo. H. Bliss, Proprietor of this flourishing watering place, offers large, well furnished rooms, single or in suites, to visitors. Also cottages for families that desire them. Grounds large, romantic and pleasant. Situated forty feet above tide water, having a beautiful view of the Bay, Ocean, City and Mountains. Premises extend to river's edge, affording rare facilities for boating, bathing and fishing. No pains spared to please guests. Address, P. O. Box 106, Santa Cruz, Cal.

POPULAR MUSIC.—Make your homes merry and popular with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. The RURAL PRESS can offer to introduce you there.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus and terms of subscription, and request that they circulate the copy sent.

MR. W. J. WOOLLEY, who took out a Canadian Patent some four years ago, is requested to call at the MINING AND SCIENTIFIC PRESS PATENT AGENCY OFFICE. Business of importance.

HAND PRINTING PRESS WANTED.—Parties having a second hand Washington or other hand printing press which they wish to dispose of, will please address this office stating price, size and condition.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, August 7th, 1878.
There is little new, save the increased receipts of Wheat and the beginning of shipments. The cars begin to show long lines of sacks, and ships are loading. Barley is coming in a little more freely, but most of the receipts are stored, and not offered for sale. To-day, there is an advance of the inside rates of California Wheat, as may be seen by the following:

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.	CLUB.
Thursday.....	10s 1d@10s 4d	10s 4d@10s 8d
Friday.....	10s —@10s 4d	10s 3d@10s 8d
Saturday.....	10s —@10s 4d	10s 3d@10s 8d
Monday.....	10s —@10s 4d	10s 3d@10s 8d
Tuesday.....	10s —@10s 4d	10s 3d@10s 8d
Wednesday.....	10s 2d@10s 5d	10s 5d@10s 8d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.	Club.
1876.....	9s 6d@9s 8d	9s 8d@10s 2d
1877.....	12s 3d@12s 6d	12s 6d@13s 2d
1878.....	10s 2d@10s 5d	10s 5d@10s 8d

The Foreign Review.

LONDON, Aug. 6.—The *Mark Lane Express* says: Wheat cutting has commenced a week earlier this season than last year, thanks to the weather. In spite of complaints of blight and defective ears, the advices in the main are satisfactory, and unless there should be an unexpected deficiency, the crop will be a fair average one, that is, about 30 bushels to the acre. Barley has improved a little, owing to recent showers, and where early sown on good mixed soils, the crop promises fairly well; but, in the eastern counties especially, the grain has suffered much from blight and premature ripening. The yield in these districts will be poor. Roots are doing well, but would be better for more rain, particularly in Scotland, where turnips and potatoes are suffering. There was very little change in trade for English Wheat, which was quiet but steady. Supplies were moderate, freshly-threshed samples commanding full prices. Occasional samples of new crop have been shown by growers. Imports of foreign Wheat into London have been more moderate, and the foreign Wheat trade maintains its firmness notwithstanding the proximity of harvest. The lower prices telegraphed from America tempted many millers to increase their stocks, and the week's sales have been fair. There does not, in the immediate future, appear to be much reason for apprehending any but slight fluctuations in values. Maize on the spot has eased slightly, both in London and at Liverpool, owing to continued heavy arrivals of shipments from Atlantic ports; but prices for cargoes off coast are maintained, owing to limited selections.

Freights and Charters.

The *Call* says: There is no improvement in the condition of the freight market, nor is there any prospects of activity until exporters fill the tonnage now under engagement, the bulk of which was chartered early in the season. Nominal rates for Grain to Liverpool, £2 5s@£2 10s. We now have in port 66,880 tons' shipping disengaged, 57,666 under engagement for

Wheat, and 10,731 loading General Merchandise. The list of vessels on the way to this port embraces 190,000 tons.

Eastern Grain Markets and Crop Reports.

DES MOINES, (Iowa), July 29th.—Reports from various portions of the State give discouraging accounts of the prospects of the wheat crop, but claim a good yield for other cereals. The intense heat and rains of the past week are causes of damage to wheat. Some fields of hundreds of acres will not be worth cutting, while others will yield all the way from five to thirty-five bushels per acre, according to the time of planting, winter wheat being generally cited as being an average of 40 bushels per acre; but spring-sown wheat is estimated, in different counties, generally at one-third and one-half the crop of 1876. Farmers have worked night and day and Sunday, and although tramps have flooded the State, men cannot be got to harvest for wages varying from \$1.50 to \$3.50 per day and board.

CHICAGO, August 2d.—President Keep has just returned from a trip over the Northwestern railroad and all its tributaries. As he has carefully examined the crop prospects in the regions where the greatest damage has been done by unfavorable weather, his conclusions are of interest. He says corn was backward until two or three weeks ago, when it took a sudden start, and is now as forward as usual at this time. In Iowa the corn crop promises as good as last year. Wheat is generally injured, largely by heat, the worst injury being in northern Iowa and southern Minnesota. There, both quantity and quality are affected, and the general yield will not exceed 10 bushels per acre. Western Iowa is better than eastern. There the average will be 12 to 15 bushels to the acre. Farmers in Minnesota seem discouraged, but elsewhere they are in better spirits. The proportion of absolutely worthless wheat is very small, but an occasional field has been abandoned. Oats are generally fair. Barley will make a poor yield. In Iowa and Minnesota wheat is mostly gathered.

CHICAGO, August 3d.—The great excitement of the week on 'Change has been the Wheat corner. So powerful was it, that it sent cash up, in three days, from \$1.05 to \$1.08½, and July from \$1.05 to \$1.10½. Corn was much less affected and buoyant than Wheat, but Cash went from 39c up to 40½c on the corner day. There is apparently little capital at liberty just now to inaugurate a bull movement in Corn—that is likely to come later. The options were very steady, September selling at the unusually limited range of 38½@39½. Oats were steady, with few sales and little interest. September, 22½@23c. Rye got excited over the corner and raised a small insurrection of its own, going up from 54c to 60c on the 31st, and then incontinently dropped to 50c the next day. The Barley corner for September delivery developed still further, and prices ran up from 92c to \$1.10, and closed firm. It is claimed that this movement is the legitimate result of a short Barley crop—some stories placing the shortage in the incoming harvest at 50% to 75%. It is true that the crop is damaged considerably, and that the acreage of Barley is small, but King Corner has more to do with the rise than either of the other influences. Cash sold at 73@90c.

CHICAGO, August 6th.—Wheat, Cash, 95½c; August, 94½c; Corn, 39c.

LOUISVILLE, August 2d.—The *News* has intelligence of a most terrific wind and rain storm, that visited a large portion of southern Indiana, yesterday afternoon. The growing Corn was torn up, twisted off, or laid flat on the ground—many hundred acres being destroyed on the line of the Ohio and Mississippi railroad. From Lexington, northward, much damage was done to crops, fences and forests. The rain poured down in broad sheets, fairly flooding the entire country, and swelling the streams to an unusual height, washing away fences and grain-stacks, and sweeping off acres of corn. The track of the storm was wide, extending half across Indiana, and into Illinois and Ohio.

NEW YORK, August 3d.—The Grain trade of the week has been very light, Western markets having ruled higher than New York, and the latter higher, relatively, than Liverpool. Closing prices here are: \$1.05@1.08 for spot, and \$1.03@1.05 bid and \$1.10 asked for September and October delivery. Winter Wheat has sold at 96c@1.25, the latter for choice old. Average new crop Winter is worth \$1.05@1.10. There have been large contracts made by exporters for forward delivery.

FOX LAKE JUNCTION, Wis., August 5th.—A severe storm of rain and wind occurred this evening. Fully two inches of rain fell in 30 minutes. Grain will be damaged considerably by wind and water. The farmers cannot stack for two or three days. The Grain is all out. Wheat on the prairies yielded but a third of a crop, of very poor quality; a good deal of it had to be mowed in.

Eastern Wool Markets.

NEW YORK, August 3d.—Quite an active demand has prevailed for Wool during the past week, but otherwise the market is unchanged. Some feeling of confidence is witnessed among the trade, and a hope is expressed that goods may be better in the near future, so that an opportunity will present itself to obtain something more than cost and expense, which many dealers find themselves unable to do now. Sales for the week are, 183,000 lbs Spring California, at 23@28c; 5,000 lbs Western Texas, 21c; 16,000 lbs Spring do, 20@25c; 55,000 lbs X and above Ohio, 37@39c; 8,000 lbs three-

eighths blood-washed Western, 37c; 8,000 lbs low combing, 37@40c; 10,000 lbs fine do, 45c; 12,000 lbs medium do and delaine, 43@45c; 8,000 lbs fine delaine, 41@42c; 7,500 lbs super-fine pulled, 35c; 114 hags shearings, 23@28c.

Boston, August 3d.—The Wool market is generally unchanged. The demand for combing and delaine fleeces continues without abatement. Every available lot is sought after, but clipping Wools are only in moderate request. Apart from the activity in delaine and combing selections, the market is comparatively tame, and manufacturers appear more or less indifferent about clothing grades. The demand for fine fleeces is fair, the sales amounting to 352,000 lbs. Pulled Wools are in better demand. The sales of the week include Ohio, Pennsylvania and West Virginia fleece, No. 1, X and XXX, at 36@42c; Michigan XXX and No. 1, at 34@40c; No. 1 Wisconsin, at 37c; New Hampshire, at 35c; New York fleeces, at 32@33c; washed combing and delaine, 39@44c; unwashed combing and delaine, 27@30c; Texas, 15@25c; Territory, 20@27c; scoured, 31@70c; tub washed, 38@40c; super and X pulled, 26@42c. In California Wool business has been quite large, comprising 579,000 lbs for the week, at 16@20c for Spring, and 15@20c for fall—the best Northern selling at 27@30c.

PHILADELPHIA, August 6th.—Wool is quiet, but firm. The supply is ample. Ohio, Pennsylvania and West Virginia XX and above, 37@40c; X, 36@38c; medium, 37@38c; coarse, 32@33c; New York, Michigan, Indiana and Western fine, 33@36c; medium, 36@38c; coarse, 32@33c; combing, washed, 40@45c; do unwashed, 28@28½c; Canada combing, 36@40c; fine unwashed, 20@25c; coarse and medium unwashed, 24@28c; tub washed, 36@40c; Colorado fine and medium, 18@22c; do coarse, for carpets, 14@17c; extra and Merino pulled, 30@33c; No. 1 and super pulled, 30@33c; Texas fine and medium, 15@25c; do coarse, 14@16c; California fine and medium, 20@25c; do coarse, 18@22c.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks.

ARTICLES.	WEEK. July 17.	WEEK. July 24.	WEEK. July 31.	WEEK. Aug 7.
Flour, quarter sacks..	28,827	22,300	96,384	37,423
Wheat, centals.....	113,742	235,223	215,274	322,987
Barley, centals.....	19,132	18,757	28,076	36,303
Beans, sacks.....	218	275	87	18
Corn, centals.....	1,760	496	759	188
Oats, centals.....	1,710	1,361	3,294	3,551
Potatoes, sacks.....	13,525	12,001	11,126	7,203
Onions, sacks.....	396	330	318	554
Wool, bales.....	2,770	3,770	7,133	1,475
Hops, bales.....		27	13	
Hay, bales.....	2,416	1,525	2,202	2,406

BAGS—Wheat Bags are firm at the ring price, 12½c; the jobbing rate being 13c cash. Barley Bags (23x40) have advanced to 14½c. A large lot of Wheat Bags, 54,000 is reported sold at auction at \$12.15@12.17 ½ 100.

BARLEY—Prices are maintained as small offerings are made. We note sales: 300 sks choice Bay, suitable for brewing, at \$1.05; 200 Bay Feed, \$1.02½; 200 fair do, \$1; 115 and 200 good Coast Feed, \$1; 100 do, 92½c; 100 do, 90c ½ ctl. Chevalier Barley is quoted at \$1.75 ½ ctl, and is in demand for export. It is said \$1.75 was offered Tuesday for 300 tons choice Chevalier. A lot of 408 sks old Bay Feed sold at \$1.10, silver.

BEANS—Supplies are confined to Small White and Pea Beans, and receipts are very small. Full rates are obtained.

CORN—Prices are unchanged, and nominal, because of lack of supplies. Small sales of Large Yellow have been made at \$1.90 ½ ctl.

DAIRY PRODUCE—Fresh roll Butter continues to improve a little, as shown in our quotations. Cheese is unchanged.

EGGS—Eggs have reached 35c for fresh California during the week, but to-day exhibit a little weakness, and are talked down to 33c and 34c.

FEED—Corn Meal and Middlings have advanced a trifle. Hay is now coming in in considerable amounts. Prices are unchanged. We note sales of 308 bales Barley and Oats, mixed, sold at \$8.50; a cargo of Cow, \$8.75; cargo of Oat, \$10; cargo of Wheat and Wild Oat, mixed, \$12; inferior quoted down to \$7; choice Wheat up to \$14.50 ½ ton.

FRESH MEAT—Beef is a shade firmer. Mutton is unchanged, and Pork lowers a little. The supply is ample of all kinds. Lower grades of Beef are one-half cent higher than on last report.

FRUIT—The supply of tropical Fruit is much reduced, there being no Bananas, Pineapples, nor Cocoanuts at wholesale. Our list of Domestic Fruits shows many fluctuations in value during the week.

HOPS—The local situation is unchanged, except a disposition to clean out the few remaining bales of the old crop. We note a sale of 50 bales Oregon at 3½c ½ lb. Emmet Wells reports the market at New York city, for the week ending July 26th, as follows: "A few Hops have been placed with brewers at prices within range of our quotations, but the export traffic has been nothing to speak of. Some of our exchanges are beginning to give estimates of the coming crop, a few putting the yield at one-half, and others at two-thirds of last year's; but they leave the growers in the dark as to what they consider the amount of Hops grown last year. Estimates of the '77 crop ranged all the way from 150,000 to 300,000 bales. Our estimate—as will be seen by referring to Circu-

lar, September 7th, 1877—was 200,000 bales; this was before the crop was entirely gathered. We now believe it reached nearer 250,000 bales, therefore putting the consumption at 125,000 bales, if we grow only one-half the amount we did last year, we will have just enough to carry us through, leaving none to spare for export; but if the yield equals two-thirds of last year's, we shall have 40,000 to 50,000 bales surplus."

LIVE STOCK—We hear of the following sales for cash: 150 Lambs, \$1.80, gold; 1,120 Hogs, 5½c, silver; 70 Cattle, \$28.50 per head, gold; 700 Sheep, \$2.75 per head, gold; 47 dry Cows, \$25 per head, gold.

OATS—Oats are in good request and full prices are obtained. We note sales: 200 cts fair Feed, \$1.45; 350 sks common Feed, \$1.37½; 200 fair, \$1.45; 324 fair, \$1.46½; 100, \$1.47½; 1,600 good Washington Territory, \$1.50; 200 choice, suitable for milling, \$1.70 per ctl.

ONIONS—There is no change, except in San Pedro Onions, which are doing a little better.

POTATOES—The Potato trade is going along smoothly, with but little variation in price.

PROVISIONS—Provisions are firmer and prices slightly advanced. The demand is fair. Eastern markets much firmer and likely to advance still more.

TALLOW—Tallow is strong and the demand for export large.

VEGETABLES—Changes are few and unimportant. New Garlic and Green Corn are cheapened a little, and Green Peas advanced. Tomatoes are in disgrace, some 60-lb boxes selling at 20c a box.

WHEAT—The feeling in Wheat is firm and holders are confident. Quotations are slightly advanced. We note sales: 4,950 cts good Shipping, \$1.67½; 4,000 do, \$1.70; 2,000 do, \$1.68½; 4,000 do inferior, shrunken, etc., \$1.50 @1.52½; 200 do do, \$1.45; 600 do choice Milling, \$1.72½; 200 do choice proper, at Oakland, \$1.75.

WOOL—There is nothing new to report. We note sales of 50,000 lbs various, at 16@23c.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., August 7, 1878.

BEANS & PEAS.		ONIONS.	
Bayo, cts.....	5 75 @ 60	Filberts.....	15 @ 16
Butter.....	25 @ 24 50	Alviso.....	@
Pea.....	40 @ 50 @ 50	Union City, cts.....	@
Red.....	@	San Leandro.....	1 00 @
Pink.....	6 25 @ 65 50	Stockton.....	62½ @ 75
Sm'l White.....	4 50 @ 50	Sacramento River.....	1 00 @
Lima.....	4 25 @ 4 50	San Pedro.....	62½ @
Field Peas.....	1 10 @	Oregon.....	@
BROOM CORN.		POTATOES.	
Old.....	3½ @ 8	Petaluma, cts.....	1 00 @ 1 25
New.....	4½ @ 8	Humboldt.....	@
CHICORY.		Cuffey Cove.....	@
California.....	4 @ 4½	Early Rose.....	1 25 @ 1 37½
German.....	6½ @ 7	Half Moon Bay.....	1 00 @ 1 25
DAIRY PRODUCE, ETC.		Kidney.....	2 50 @
Butter.....	@	Sweet, Cal.....	75 @ 1 00
Cal. Fresh Roll lb.....	25 @ 26	POULTRY & GAME.	
Fancy Brands.....	28½ @ 30	Hens, doz.....	7 00 @ 8 50
Pickle Roll, new.....	25 @ 27½	Roosters.....	5 00 @ 6 50
Firkin, old.....	12 @ 16	Broilers.....	2 50 @ 3 50
Western Reserve.....	12½ @ 14	Ducks, tame.....	5 00 @ 6 00
New York.....	@	do, Mallard.....	@
EGGS.		do, Eastern.....	1 50 @ 2 00
Cal. fresh, doz.....	32½ @ 34	Wild Gray, doz.....	@
Ducks.....	@ 30	White do.....	@
Oregon.....	24 @ 25	Turkeys.....	20 @ 23
Eastern.....	18 @ 22	do, Dressed.....	@
do Pickled.....	@	Snipe, Eng.....	3 00 @
FEED.		do, Common.....	1 00 @ 1 25
Bran, ton.....	15 00 @ 16 00	Rabbits.....	1 50 @
Corn Meal.....	15 00 @ 16 00	Hare.....	3 00 @ 4 00
Hay.....	7 00 @ 14 00	do, Venison.....	8 @ 12½
Middlings.....	21 50 @ 23 00	PROVISIONS.	
Oil Cake Meal.....	34 00 @	Cal. Bacon, Hvy lb.....	11½ @ 11¾
Straw, bale.....	25 @ 60	Medium.....	11½ @ 12½
FLOUR.		Light.....	12½ @ 13
Extra, bbl.....	12½ @ 12½	Lard.....	11 @ 13
Superfine.....	4 25 @ 4 50	Cal. Smoked Beef.....	10 @ 11
Graham, lb.....	3½ @ 3½	Shoulders, Cured.....	7½ @ 8
FRESH MEAT.		Hams, Cal.....	11½ @ 12½
Beef, 1st quality, lb.....	5½ @ 6½	Dupe's.....	14 @ 15
Second.....	4½ @ 6	Boyd's.....	14 @ 15
Third.....	3½ @ 4½	Davis Bros.....	@
Mutton.....	4 @ 5	None Such.....	15 @ 15½
Spring Lamb.....	6 @ 7	Ames.....	15 @ 16
Pork, undressed.....	5½ @ 5½	Whitaker.....	@
Dressed.....	7½ @ 7½	SEEDS.	
Veal.....	6 @ 8	Alfalfa.....	5 @ 12
Milk Calves.....	6 @ 7½	Clary.....	5 @ 8
GRAIN, ETC.		Clover, Red.....	15 @ 16
Barley, feed, cts.....	30 @ 32	White.....	50 @ 55
Brewing.....	35 @ 37	Cotton.....	6 @ 10
Chevalier.....	50 @ 51	Flaxseed.....	3½ @
Buckwheat.....	1 30 @	Hemp.....	6 @
Corn, White.....	2 25 @ 2 32	Italian Rye Grass.....	35 @
Yellow.....	1 95 @ 2 00	Perennial.....	35 @
Small Round.....	2 00 @ 2 05	Millet.....	10 @ 12
Oats.....	1 25 @ 1 50	Mustard, White.....	4 @
Milling.....	1 55 @ 1 75	Brown.....	2½ @ 3
Rye.....	1 17 @ 1 20	Rape.....	3 @ 4
Wheat, Shipping.....	1 65 @ 1 72½	Ky Blue Grass.....	20 @
Milling.....	1 70 @ 1 80	2d quality.....	18 @
HIDES.		Sweet V Grass.....	1 00 @
Hides, dry.....	16 @ 19	Orchard.....	25 @ 30
Wet salted.....	7½ @ 9	Red Top.....	18 @ 20
HONEY, ETC.		Hungarian.....	8 @ 10
Beeswax, lb.....	30 @ 31	Lawn.....	50 @
Honey in comb.....	11½ @ 12	Mesquit.....	@ 25
do, No 2.....	8 @ 9	Timothy.....	9 @
Dark.....	8 @ 9	TALLOW.	
Strained.....	5 @ 6½	Credo, lb.....	7½ @ 8
HOPS.		Refined.....	9½ @ 9¾
Oregon.....	3 @ 5	SPRING.	
California.....	4 @ 7	S Joaquin, 12mo free.....	17 @ 19
Wash. Ter.....	4 @ 6	do 6 & 7 mo do.....	15 @ 18
NUTS—Jobbing.		Burry, 12mo.....	13 @ 16
Walnuts, Cal.....	8 @ 9	do 6 mo.....	14 @ 16
do Chile.....	7 @ 8	Scabby.....	12½ @ 15
Almonds, Cal.....	7 @ 8	South Coast, free.....	16 @ 19
Soft sh.....	14 @ 16	do do hurry.....	14 @ 16
Brazil.....	14 @ 16	Northern, free.....	23 @ 25
Pecans.....	13 @ 14	do, seedy & hurry.....	20 @ 22
Peanuts.....	5 @ 6	Nevada.....	18 @ 22
		Oregon Valley.....	22 @ 24
		do, Eastern.....	17 @ 20

Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, August 7, 3 P. M.

LEGAL TENDERS in S. F., 11 A. M., 99½ @ 99.50. SILVER, 1½ @ 1½. GOLD in New York, 100½. OLD BARS, 890 @ 910. SILVER BARS, 8 @ 15 ½ cent. dls 300th. EXCHANGE on New York, 1½, on London bankers, 49 @ 49½. Commercial, 50; Paris, five francs 50 dollar; Mexican dollars, 94 @ 95. LONDON Consols, 95½; Bonds, 108½. QUOTATIONS in S. F., by the Bank, ½ lb, 42 @ 42½c.

FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., August 7, 1878.

FRUIT MARKET.		PEACHES.	
Apples, box.....	25 @ 1 00	Pears.....	8 @ 10
Apricots, lb.....	2 @ 3	Plums.....	4 @ 7
Bananas, each.....	2 @ 2 50	Pitted.....	12½ @ 14
B'berries, ch't 2 00 @ 2 50		Prunes.....	14 @ 10
Cocoanuts, 100.....	@	Raisins, Cal, bx 1 00 @ 1 66	
Figs, lb.....	4 @ 6	do, Halves.....	1 50 @ 2 00
Grapes, white, bx.....	40 @ 75	do, Quarters.....	1 50 @ 2 50
Grapes, black, do.....	75 @ 1 00	Blowers.....	2 75 @
Limes, Mex.....	7 00 @ 8 00	Zante Currants.....	2 75 @ 3 00
do, Cal, per M.....	10 @ 15 00	VEGETABLES.	
Lemons, Cal M.....	9 00 @ 10 00	Beets, cts.....	62½ @
Mangoes, 100.....	3 00 @	Beans, String.....	1 @ 1½
Oranges, Mex.....	@	Cabbage, 100 lbs.....	50 @
M.....	@	Cantaloupes, doz.....	75 @ 1 00
Tahiti.....	10 @ 20 @	Carrots, cts.....	50 @ 63½
Cal.....	@	Cauliflower, doz.....	50 @ 75
Peaches, box.....	40 @ 1 00	Cucumbers, bx.....	25 @ 40
do, basket.....	50 @ 1 25	Garlic, New, lb.....	2 @
Pears, box.....	25 @ 50	Green Corn, doz.....	4 @ 5
do, Bartlett.....	1 00 @ 1 25	do, Bay.....	8 @ 10
Pineapples, doz.....	@	Green Peas.....	2 @ 2½
Plums, lbs.....	1 @ 3	Lettuce, doz.....	10 @
Prunes, lb.....	3½ @ 4	Parsnips, lb.....	2 @
Raspberries, lb.....	9 @	Horseradish.....	7 @ 8
Strawberries, 2 50 @ 3 50		Squash, Marrow.....	1 @
DRIED FRUIT.		Apples, lb.....	5½ @ 7½
Apricots.....	10 @ 12½	Summer do, bx.....	20 @ 30
Citron.....	23 @ 24½	Tomato, 60 lbs bx.....	15 @ 25
Dates.....	9 @ 10	Turnips, cts.....	75 @
Figs, Black.....	4 @ 7	White.....	50 @
White.....	6 @ 8	Wat r'n't's, 100.....	8 00 @ 10 00

LUMBER.

WEDNESDAY M., August 7, 1878.

CARGO PRICES OF PUGET SOUND PINE.		RETAIL PRICE.	
Rough, M.....	13 00	Rough, M.....	18 00
Refuse.....	9 00	Fencing.....	18 00
Clear.....	23 00	Flooring and Step.....	28 00
Clear Refuse.....	13 00	Narrow.....	30 00
Rustic.....	23 50	2d quality.....	25 00
Refuse.....	18 00	Laths.....	3 50
Surfaced.....	20 00	Furring, lineal ft.....	2
Refuse.....	14 00	RETAIL PRICE.	
Flooring.....	20 00	Rough, M.....	18 00
Beaded Flooring.....	23 00	Refuse.....	14 00
Refuse.....	13 00	Pickets, Rough.....	15 00
Half-inch Siding.....	16 00	Pointed.....	16 00
Refuse.....	14 00	Fancy.....	22 50
Half-inch Surfaced.....	20 00	Siding.....	20 50
Refuse.....	14 00	Surfaced & Long Beaded.....	30 00
Half-inch Battens.....	11 00	Flooring.....	30 00
Pickets, Rough.....	11 00	Fencing.....	22 50
Rough, Pointed.....	12 50	Tomato, 60 lbs bx.....	30 00
Fancy, Pointed.....	18 00	Turnips, cts.....	75 @
Shingles.....	1 75	Shingles, M.....	2 00

Signal Service Meteorological Report.

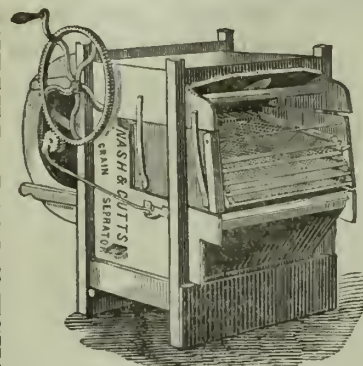
Week Ending August 6, 1878.

HIGHEST AND LOWEST BAROMETER.						
July 31	Aug 1	Aug 2	Aug 3	Aug 4	Aug 5	Aug 6
29.94	29.99	30.00	29.97	29.97	29.99	29.94
29.88	29.93	29.92	29.91	29.93	29.92	29.90
MAXIMUM AND MINIMUM THERMOMETER.						
60	61	63.5	62	63	66	65
53	53	53.5	54	54	54	53
MEAN DAILY HUMIDITY.						
51.3	79.7	79	81.7	77	81.3	71.3
PREVAILING WIND.						
SW	SW	SW	SW	SW	W	SW
WIND—MILES TRAVELED.						
281	263	255	273	389	402	286
STATE OF WEATHER.						
Cloudy	Fair.	Fair.	Fair.	Clear.	Clear.	Clear
RAINFALL IN TWENTY-FOUR HOURS.						
Total rain during the season, from July 1, 1878, .01 in.						

Agricultural Articles.

THE BEST IS THE CHEAPEST.

NASH & CUTTS' PATENT



GRAIN SEPARATOR AND FAN MILL.

THREE SIZES—Warranted to Clean from 60 to 200 bushels per hour, perfectly.

PRICES—\$35, \$45 and \$62

The Nash & Cutts' Machine is the only machine that has taken the First Premium at California State Fairs in 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877.

Nash & Cutts' Machine will thoroughly separate Mustard Seed, Cheat, Barley, Oats, Cracked Wheat, etc., from Wheat in a rapid and satisfactory manner.

No zinc sieves used in the Nash & Cutts' Grain Separator and Fan Mill; therefore we can

Clean Faster, Better, and with Less Work and Trouble,

Than any other machine now in use.

The Nash & Cutts' Machine is the only one that will clean Alfalfa Seed. All we ask of any one in want of a Grain Separator is to give the Nash & Cutts' a trial.

EVERY MACHINE FULLY WARRANTED.

The Nash & Cutts' Machine is for sale by all Agricultural Implement Dealers in California.

For further particulars address

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No. 264 K Street, Sacramento, Cal.

Only manufacturers of the Nash & Cutts' Grain Separator for the Pacific Coast.

The Famous "Enterprise"

(PERKINS' PATENT
Self Regulating

WINDMILLS,

Pumps & Fixtures.



These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbit boxes.

Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

HORTON & KENNEDY,

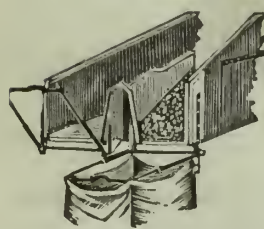
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ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE

& CO., 401 Market Street.

To Threshers.



Hold Your Bags

Save

MONEY!!

FILL

THEM

FULL.

Shake Them Down.

HOW? USE THE
"CALIFORNIA SACKHOLDER."

Simple, Cheap,

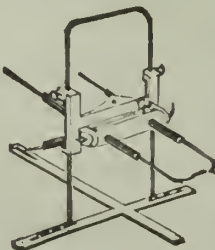
Adjustable to any
Sized Bag.

LONG,

SHORT,

WIDE,

Or Narrow.

Completest Device Ever Invented
and Lasts a Lifetime.Discount to the trade. General Agency for the
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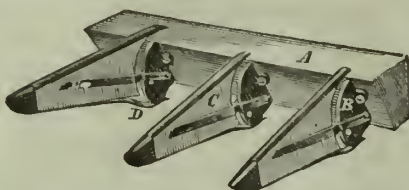
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San Francisco and Sacramento

BONNEY'S PATENT

Adjustable Grain Lifter for Headers.



All farmers who wish to save grain without waste in cutting, should examine these. They can be run at any inclination to the ground, as seen at D in cut. Are light, strong and durable, and can be adjusted in 15 minutes, or removed in five when not required, by drawing bolt in malleable shank B. Set of 8 for 10-foot header, (in putting on which bore with 1/2-inch bit for lag screws) are the cheapest and give the best satisfaction of any in use. Parties can save additional cost of a set in one day's cutting, where grain is lodged or trinkles down. Price, \$40. Also, Grain Belts, Header Sticks, etc. Manufactured for

BAKER & HAMILTON,
San Francisco and Sacramento, Sole Agents, Pacific Coast.

MATTESON & WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

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JOHN H. GOVE'S PATENT IMPROVED

Centennial & Eagle Hay Presses,

MANUFACTURED BY HIM AT THE

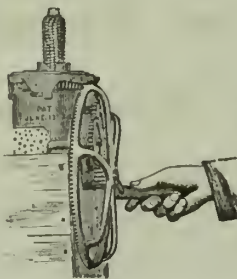
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Peerless Corn Sheller.



It is so cheap (costing only \$6), that almost any one can afford to buy one. It is so rapid, it will shell almost as fast as a \$40 machine, and seven or eight bushels per hour is not above its capacity. It weighs only 13 pounds and is simple and durable. For particulars, address

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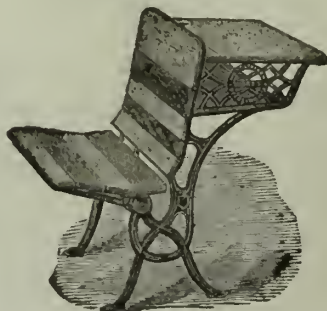
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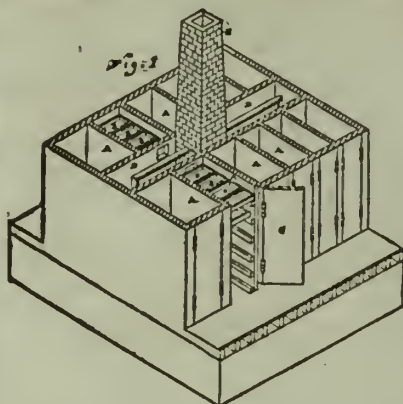
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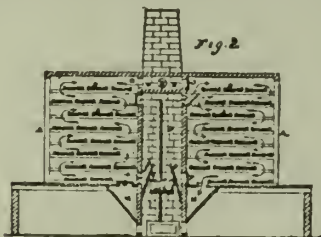
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Prospective View, Showing Draft Chimney, Furnace and Drying Rooms.



Transverse Section Showing Heating and Drying Chambers and Currents of Heated Air.

The Only Successful Fruit Drier in the World.

Professor D. M. Mefford, inventor of the celebrated Mefford process of drying fruit and vegetables without loss of color or flavor, says of the Blowers' Drier: "Your Drier is really the only Fruit Drier in the world, and compared with which every drier I have seen (and I have seen them all,) is really worthless for successful factory work. If fruit driers wish to make a success of their work they must use your house."—D. M. MEFFORD, Toledo, Ohio, March 2d, 1878.

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CALIFORNIA FRUIT DRIER

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CALIFORNIA GOLD MEDAL

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IT IS THE

BEST FRUIT DRIER,

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D. D. T. 1868.

As a horse medicine it is superior to any liniment ever invented. For RINGBONE, SPRAIN, SWELLING, CALLOSUS LUMBS, and all OLD SORES, apply freely so as to blister, from three to five days in succession, and in four or five days, if not cured, repeat as at first. SPRAINS, STIFF JOINTS, BRUISES, WINDGALLS, and all slight ailments, apply a small quantity so as not to blister. Saddle Sores, Cuts, and all other sores where the skin is broken, mix the liniment half and half with any kind of oil, and apply in moderation.

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There is a good chance in Tehama County for a skilled man who will go to work and start a nursery. The location is one mile from Vina station, in Tehama County, in a good growing region of country; the land is first-class and water abundant. A man is wanted, with good references, who will start a first-class nursery in partnership with the owner of the land. Address,

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SEEDS.

SEEDS.

IMPORTED.

Crosby's Extra Early
Marblehead Mammoth
Stowell's Evergreen
Mexican Sweet, New

Sweet Corn.

Early Canada
Early Dutton

Yellow Flint Corn.

Long Red Mangel Wurtzel
Yellow Globe
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Beet Seed.

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

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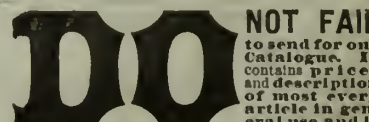
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Fruit Trees and Ornamentals,

Of the most approved varieties. Also, Coffee, Cork Oak, Olives, Guavas, English and Black Walnuts, Magnolias, Loquats, Butternuts, Small Fruits, Evergreens, Etc. We have a choice stock of the Diospyros Kaki (Japanese Persimmon), of our own growing, and also, grafted stock imported direct from several Japan Nurseries. Address for catalogue and terms,

DR. J. W. CLARK, No. 418 California St., San Francisco, Or JAMES SHINN, Niles, Alameda Co., Cal.



DO NOT FAIL to send for our Catalogue. It contains prices and description of most every article in general use, and is valuable to ANY PERSON contemplating the purchase of any article for Personal, Family or Agricultural use. We have done a large trade the past season in the remote parts of the Territories, and have, with few exceptions, exceeded the expectations of the purchaser, many claiming to have made a saving of 40 to 60 per cent. We mail these CATALOGUES TO ANY ADDRESS FREE, UPON APPLICATION. We sell our goods to all mankind at wholesale prices in quantities to suit. Reference, First National Bank, Chicago.

MONTGOMERY WARD & CO.,
Original Grange Supply House,
227 & 229 Wabash Ave., Chicago, Ill.

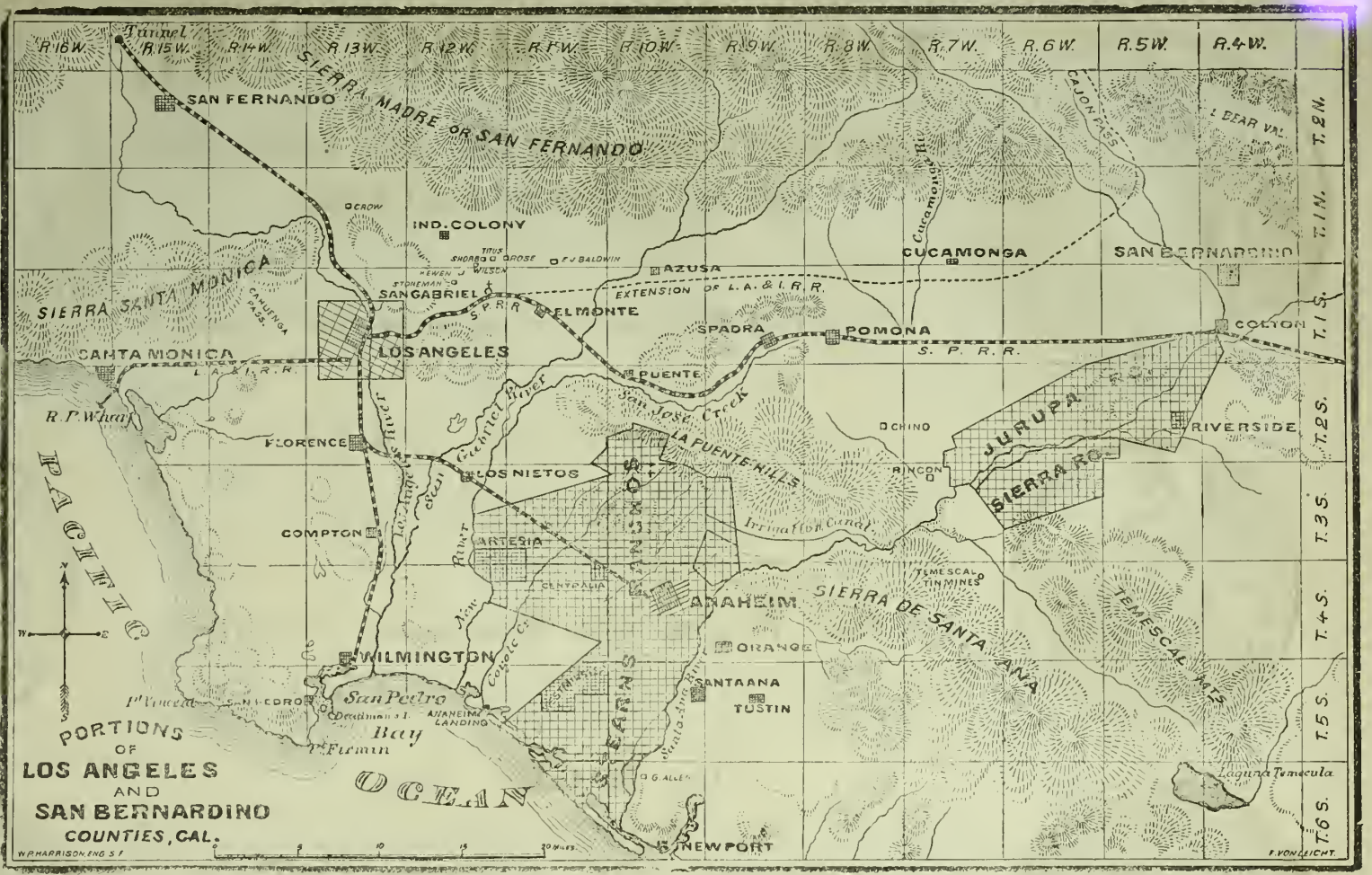
YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

The Accompanying Map shows the

"Abel Stearns" RANCHOS,"

The Center of Los Angeles Valley.

Six hundred Farms already sold and improved. Within the Artesian Well Belt, and having water near the surface. For sale in sections or fractions by ALFRED ROBINSON, Trustee, 120 Sutter street, near Montgomery, San Francisco, or apply to WM. R. OLDEN, Anaheim, Cal; or, concerning the Colony, to REV. ROBERT STRONG, Westminster, Cal. Terms, one-fifth cash; balance, 1, 2 and 3 years. Interest at 10 per cent., payable at end of each year. The larger squares represent Townships six miles square, containing 36 sections. The smaller squares, within the STEARNS' RANCHOS, represent 160 acres. Roads are proposed to be laid out on every section line, forming blocks of one mile square, with roads on all sides and on many quarter section lines. SEND FOR CIRCULARS.



Winchester Repeating Rifle,

MODEL 1873.



The Strength of All its Parts,
The Simplicity of its Construction,
The Rapidity of its Fire,
The Power and Accuracy of its Discharge,
The Impossibility of Accident in Loading,
Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:
Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbine blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder,

JOHN SKINKER, No. 115 Pine Street, San Francisco,
SOLE AGENT FOR THE PACIFIC COAST.

LAND! BOUNTY!! PENSIONS!!! PATENTS!

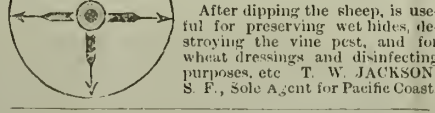
Do you want to buy, sell or exchange lands or other property in any part of the U. S. or Canada? Are you a Soldier or Sailor, in want of a Patent? Why not obtain more Bounty or Pension? Do you want to locate Government or State Lands without settlement? Why not? When I have the well-known Approved Soldiers' Additional Homesteads, under seal of the General Land Office, and that can be located without settlement, upon any Government \$1.25 or \$2.50 lands, subject to homestead. The Sioux Half-Breed Scrip, for location upon unsurveyed lands.

Land Warrants and Scrip of all Kinds
For cash, or part on time. Good title given or no pay. Have you any lands with an imperfect title to sell, or choose vacant lands you know of which could be located to advantage; or claims not lawfully held, which we could contest. Let me hear from you in full, and I will do my best to inform you what is to your advantage.

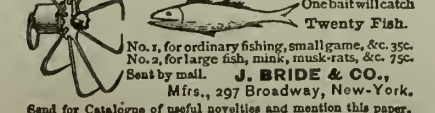
I will mail you a circular explaining all, and a copy of the new Pension Law. Address, (plainly)

D. H. TALBOT,
General Land, Scrip and Warrant Broker, Sioux City, Ia.

Calvert's Carbolic SHEEP WASH, \$2 Per Gallon



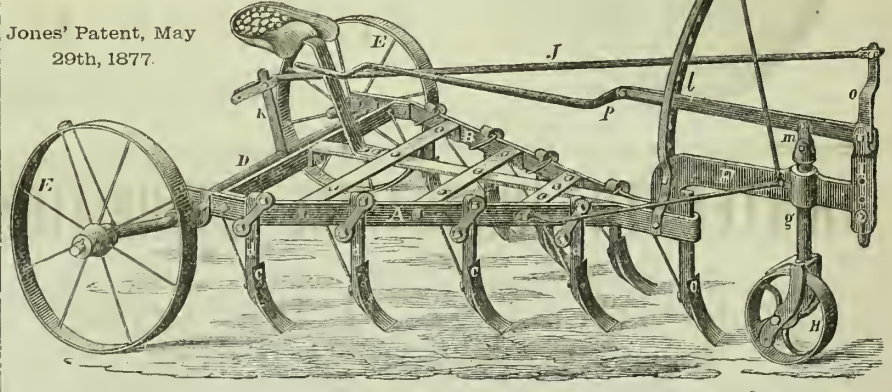
After dipping the sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.



"THE EAGLE CLAW."
The best Trap in the World for catching FISH, ANIMALS & GAME.
Onebaitwillcatch Twenty Fish.
No. 1, for ordinary fishing, small game, &c. 35c.
No. 2, for large fish, muskrats, &c. 75c.
Sent by mail. **J. BRIDE & CO.,**
Mrs., 297 Broadway, New-York.
Send for Catalogue of useful novelties and mention this paper.

HOLLY & MACOON'S CULTIVATOR.

Manufactured by Holly & Magoon, Stony Point. Sonoma Co., and Holly & Jones, Lakeville, Sonoma County.



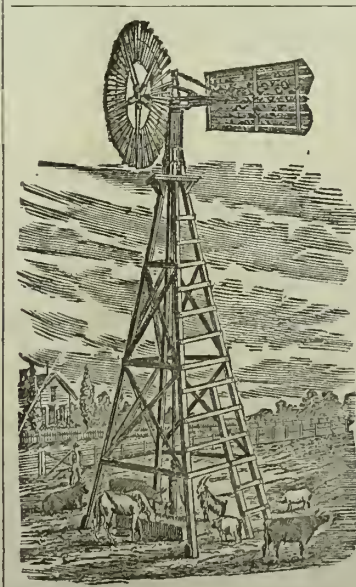
Jones' Patent, May 29th, 1877.

This Cultivator is made by practical men, after years of experience, and better meets the wants of California farmers than anything before offered.

Made of the best material (with wood or iron frame), and warranted in every respect.

Prices
REASONABLE.

For further information address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Francisco and Sacramento, Cal.



IF YOU WANT A Wind Mill,

THE MOST POWERFUL AND THE NEAREST PERFECTION OF ANY IN USE—ONE THAT PROTECTS ITSELF IN A GALE, WILL KEEP YOUR TANK FILLED WITH Water Without Waste and Without Attention,
EXAMINE THE RECENT Improvements of Mr. Bachelder,
As now Manufactured by the
Bachelder Manufacturing Co.,
NAPA, CAL.

HEMORRHOIDS OR PILES,
A treatise on their scientific treatment and radical cure, by E. J. FRAZER, M. D., San Francisco. Price, 25 cents; for sale at the bookstores and by the author at 221 Powell street. Sent by mail to any address on receipt of the price in coin, currency or postage stamps.

Agents Wanted.
Able and reliable canvassing agents, who wish steady employment and good wages for good services, are invited to address this office and send references.

25 FASHIONABLE VISITING CARDS—No two alike, with name, 10c. Nassau Card Co., Nassau, N. Y.



THE AVERILL MIXED PAINT,

Prepared Ready for Use, is the Best, Most Durable, Beautiful and Economical Paint Known.

As is proven by the numerous Medals received over all other Paints, as well as by thousands of testimonials from those who have used and thoroughly tested it.

It is of Pure White and any Shade or Color Desired.



AS A HOUSE PAINT

It is the most perfect substance known, possessing unsurpassed beauty, great brilliancy of color, adhering firmly to the wood, and giving the richest, most agreeable and uniform tints.

It is equally as good for inside as outside work; over old work as well as new; in fact where any Paint can be used the AVERILL PAINT will be found superior to any other.

Houses painted with it are distinguishable for years by their superior brilliancy of finish, over those painted with any other paint.

Our Wagon and Machinery Paints

From the finest Vermilion, to the more common and cheaper colors, are specially fine, and being ready mixed, meet the wants of the public completely. Every person owning a wagon, or any kind of machinery, should occasionally give them a fresh coat of paint. It would add to the durability and appearance of the articles a hundred times its cost.

Our Metallic Paint

Comes the nearest to being actually Fire Proof of any Paint ever made. For Tin Roofs it has no equal, it being entirely impervious to air or moisture—rust or corrosion is impossible, while its use on shingle roofs not only fills up the cracks and prevents the shingles from warping, so as to preserve the roof and prevent its leaking, but its fire proof qualities are such, that a roof thoroughly coated with it is nearly as safe from fire as if made of iron. This feature, together with its cheapness, makes it most desirable for warehouses, bridges, mining buildings, and for all purposes where durability and fire proof qualities are desired.

Ask your dealers for it and take no other. Sample Cards of Colors and Price List mailed free on application to

California Paint Company,

No. 329 Market Street, San Francisco, Cal.



THIRTEENTH INDUSTRIAL EXHIBITION

—OF THE—

Mechanics' Institute.

San Francisco, Cal., 1878.

The Managers have the honor to announce to the public that the Thirteenth Grand Exhibition of Science, Art and Industry, given under the auspices of the Mechanics' Institute, will open at the Pavilion on Market, Eighth and Mission streets,

TUESDAY, AUGUST 13th, 1878.

Great and unusual attractions will be presented to visitors. Mining, Agricultural and other Machinery will be in motion. Pacific Coast Manufactures, Minerals and Products of the soil will be fully represented, besides many new and interesting novelties never before exhibited on this coast.

THE ART DEPARTMENT

Will be under the supervision of the San Francisco Art Association—a guarantee for excellence and completeness. Local Art will be specially represented, as also works of noted foreign Artists, selected from the private galleries of this city.

THE HORTICULTURAL GARDEN,

So popular heretofore, will be made still more attractive this year by the addition of many new features.

THE MUSIC.

Every afternoon and evening a first-class Instrumental Concert will be given by the best soloists and accomplished musicians of this city, with a daily change of programme of the best and most popular music.

No expense or pains will be spared by the management that will add to the comfort or convenience of visitors. Applications for space or information can be obtained from the Secretary, at the office, 27 Post street.

IRVING M. SCOTT, President.

J. H. GILMORE, Superintendent.

J. H. CULVER, Secretary.

California Furniture Manufacturing Co.,

224 & 226 BUSH STREET, SAN FRANCISCO, CAL.

Manufacturers, Importers, Wholesale and Retail Dealers in

FURNITURE, Etc.

LATEST STYLES AND LOWEST PRICES.

"General Guster's Death Struggle,"

The Most Beautiful Tinted Engraving Litho. ever copyrighted in the United States. Surpassing the FINEST STEEL ENGRAVING, 18x25 inches in size, just published by the PACIFIC ART COMPANY. Owing to the great demand for this POPULAR PICTURE, the Company have published an ENLARGED EDITION, which they have determined to distribute (for the next 30 days) as a

Grand Introductory Gift for the Million

Arrangements have been made for a reduction of the cost of Casing, Mailing and Postage to 35 Cents. THE GRANDEST ATTRACTION OF ALL! A New Feature in Art Distribution! All subscribers for this BEAUTIFUL PICTURE thereby become HONORARY MEMBERS of the Company, and as such are entitled to all pictures published by the Company, AT COST, as soon as issued. Send 35 cents (in coin, currency or three-cent postage stamps) to PACIFIC ART COMPANY, San Francisco, Cal., and you will receive the picture by return mail. Club rates, 2 to one address, 65 cts.; 6 to one address, \$1.50. This advertisement will not appear again in this paper.

TO CATTLE BREEDERS.

A party owning a herd of first-class thoroughbred Durham Short-Horn Cattle, who proposes whinding up business, would be glad to correspond with parties desiring to buy such a herd, or would receive proposals for handling them on shares from parties having a good ranch, well located for sales of young stock, and who thoroughly understands the handling of such stock. Address with full particulars, Lock-Box 131, Oakland, Alameda Co., Cal.

18 ELEGANT new style Chromo Cards, with name 10c., postpaid. Geo. I. Reed & Co., Nassau, N. Y.

25 FANCY CARDS, Snowflake, Oriental, etc., in 25 styles, with name, 10c. J. B. Hueter, Nassau, N. Y.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y.

PACIFIC RURAL PRESS

Volume XVI.]

SAN FRANCISCO, SATURDAY, AUGUST 17, 1878.

Number 7.

Holstein Cattle.

A breed of cattle which was introduced on his coast some years ago, but which seem to have never secured the recognition which they deserve, is the breed known as Holstein or Dutch. We are not aware of the quality of the animals brought to this State, nor why they were not more widely spread. In fact our inquiries in the paper, and out of it, have brought to light but one firm of Holstein breeders, and they are Messrs. Stewart, of North Yamhill, Oregon. They have a small herd of choice animals and are breeding carefully. If there are others who are breeding the Holsteins pure we should like to know who they are and what they have done with the breed. We take an interest in the cattle because we know that when they are of true blood they are very satisfactory dairy animals. We do not say that they are superior to the milking strains of Short Horns in producing capacity, nor to the Jerseys in richness of milk; but placing the cattle on their own basis, we can say that they have a good claim to the consideration of the dairyman, both because of their history and the records of their present accomplishments in the Eastern dairy States. They are found to be capacious cattle, having abundant room for the transformation of considerable amounts of food into milk; and weighings which have been made of yield of milk as compared with the amounts of food consumed shows that they are economical in their manufacture. They have been bred for centuries in Holland especially with a view to the production of milk, and their present characteristics are therefore well established. We shall allude to this point of the cattle more fully at some future time when we shall present a portrait of the Holstein cow.

The Holstein breed has probably the right to claim seniority among the distinct breeds of cattle. They are known to have been bred for more than 300 years in the north of Holland. Some of the animals were brought to this country as early as 1625, by the Dutch West India company, and became a factor in the mixture which is now known as native stock in the Eastern States. These Dutch cattle were taken to Scotland about the middle of the 18th century and became popular for crossing with the native cattle. It is claimed that this Holstein blood was an element entering into the founding of both the Short Horn and Ayreshire breeds of cattle which have been developed to such eminence since that time. Be this as it may be,

the age of the Holsteins as a breed is well authenticated, and the history of the country shows that there were efforts made to improve the cattle by judicious breeding of the best animals, and thus the modern breed was established. Now the Holstein has the advantage of record, and the breeding is carried on as systematically as that of the other leading breeds. The introduction of the modern Holstein was begun in this country by Mr. Winthrop W. Cheney, of Massachusetts, in 1837, and now is carried on by a score or more of breeders in different parts of the country. One of the leading importers is Mr. George E. Brown, of Elgin, Illinois, the owner of the animal shown upon this page. The bull is a representative one and with his brilliant contrast of black and white colors, is a very handsome animal. The Hol-

The Introduction of Steam Wagons.

Steam wagons seem to be gaining entrance on this coast. One of English manufacture is being used for threshing by H. C. Copeland, of Tehama county. It drives the separator, and, at time of moving, it draws all its wagons and machines, and other appurtenances any distance at a speed of about three miles an hour, its weight being about six and one-half tons. Its work seems to be generally satisfactory.

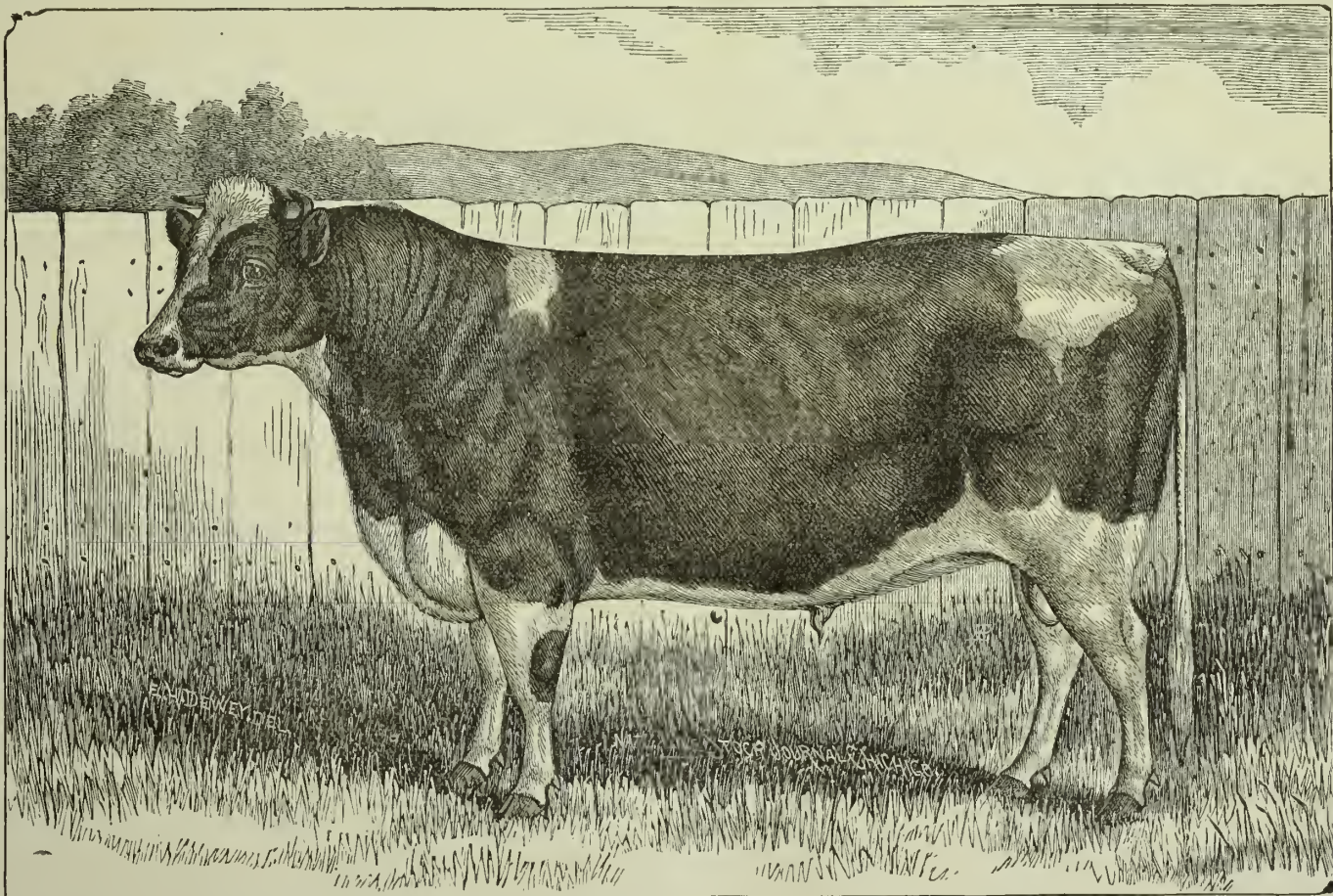
Another enterprise, of more strictly local moment, is being pushed by Gaskill Bros., of Campo, San Diego county. From an account in the *Arizona Sentinel*, we learn that the contract for carrying the daily mail between Yuma and San Diego has been intrusted to Gaskill Bros. About 100 miles of the road lies

Wheat Here and Elsewhere.

Wheat is firm. Shippers have improved their figures somewhat from the mark they set at the beginning of the harvest. Ocean freights to England are low, and though chartering has proceeded quite rapidly during the last two weeks, the Bay is still well dotted with ships not yet taken. The outlook is good for a fair price for all the grain in good shipping condition, which we shall have to spare this year.

The thought naturally turns abroad, for there is our market and there are our producing rivals. England is enjoying better weather for her home harvest than she has had for three years, and though this fact will reduce her appetite somewhat, her home production is so far short of her need, that the key to the situation will always be held by foreign producers. The *Agricultural Gazette*, of London, thinks the good home prospect for wheat is "having rather an exaggerated effect on English trade at present; but trade will start much better from a low level of value than if prices were now to gain a few shillings. One shilling after harvest is better than two shillings before as regards permanent firmness."

The latest advices concerning crop prospects in the regions which vie with us in supplying the English demand, seem to favor the coming price rather than otherwise. From the advices to the *Gazette*, we learn that the reiteration of unsatisfactory reports from the south, center and east of France at so late a



IMPORTED HOLSTEIN BULL, OWNED BY GEORGE E. BROWN, OF ELGIN, ILL.

stein bull is now being used to a considerable extent in crossing upon the native dairy cows at the East, and his prepotency in transmitting the desirable characteristics of his breed is attested by the progeny which we have seen.

CALIFORNIA HONEY FOR GERMANY.—We hear that Chas. J. Fox, President of the San Diego Beekeepers' Association, gives notice that he has just made arrangements with a reliable house in Hamburg, Germany, that will make an advance of \$4.80 per 100 pounds of honey on bills of lading. The firm estimate the advance to be about two-thirds of the net value of the honey. They write that they can sell promptly all the honey that may be shipped to them. Mr. Fox believes that shippers have a prospect of 50% more on settlement.

A BARN full of hay and grain, the property of A. L. Chandler, living 10 miles west of Lincoln, Placer county, was burned on August 5th by an incendiary.

across the California desert. Across this stretch mail and passengers are soon to be carried by steam. Messrs. Gaskill are industrious inventors, and have obtained a number of patents. One of their last inventions is a steam wagon, designed more particularly for traveling level and sandy roads. A working model has been made which fully demonstrates the practical value of the invention. One of the brothers has just purchased a suitable engine and boiler at San Francisco, of about two-horse power. The wagon will be made in their shop at Campo. It will have two driving wheels of seven feet diameter and 12 inches width of tire. The whole apparatus will weigh about 2,000 pounds, when supplied with fuel and water, and ready for business. It is intended to make an average speed of eight or ten miles per hour, carrying five or six persons and a moderate weight of baggage and mails.

GRASSHOPPERS have visited Dakota.

date as July 20th, cause many persons to look for a recovery of value in England shortly, particularly as recent letters from the south of Russia say the crops there of wheat and rye will not reach half an average, whilst East India appears unlikely to export any important bulk of wheat. The good crops of Italy and Spain have also to make some deductions from their first estimates. Chile and Australia send but very moderate cargoes, and nothing comes from Egypt, although the waters of the Nile, rising favorably, promise an abundant season will succeed the last very deficient one. All these considerations doubtless have something to do with the gradual hardening of values which is proceeding in our local trade, and all promise well for the future.

THE French vines are reported to be showing badly from that insect pest, the phylloxera, and other causes, in Lyons, Haut-Rhine, and other departments.



CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Ventura County.

EDITORS PRESS:—This county is not yet much developed in its agricultural resources. Thorough systems of irrigation are not yet planned, manufactories not yet established, and the great oil resources are as yet almost untouched by capital. These facts, together with the inconvenient railroad facilities, make the dull times severely felt. Many had counted on a wheat crop, and, but for the season being against them, would now have their first advances on their harvested wheat. In every part of the county the promise for a large yield of wheat was flattering, and in none better than in the charming

Mountain Valley of the Ojai.

Where field after field, free from all weeds, presented the most perfect stand of wheat. All headed out beautifully, and gave a promise of most ample reward for good, intelligent labor. To ensure its prompt harvesting several joined in the purchase of a real first-class steam engine, separator and accompanying outfitings to do the best of harvesting; but, alas, how disappointed to find an almost general blight, accompanied in part with rust, that cuts off all hope of harvesting their wheat to any profit, and it is too late to plow and plant any other crop. True, some will be cut for seed and for bread, but little to meet the small balance due on the place they had chosen as the most beautiful, and dedicated as home, and dared to challenge any land or climate to show a lovelier or more beautiful climate or more attractive scenery.

The upper and lower Ojai are simply two adjoining valleys, one high and the other higher, connected by a good graded road of about a mile in length. The upper Ojai has some beautiful farms and orchards, and quite extensive cattle ranges up the sides of the surrounding mountains. This valley as well as the lower Ojai is noted for rich, productive soil, and pleasant and healthy altitude of about 1,100 feet.

The lower Ojai, 900 feet altitude, is the larger, being near 10 miles in its windings among the small hills; but the width does not generally exceed a mile. It is 16 miles by good road from the ocean. The residences are generally neat and tasteful, and some even elegant.

W. S. McKee, who lives in the center of the great oak park and one mile above the village of Nordhoff, has spent considerable to make his "Oak Glen Cottage" truly "The Home of Invalids." The location is well selected, in the center of the largest part of the valley, surrounded by an immense park of live and white oaks, resembling a venerable old apple orchard, slightly irregular, as if a tree had died here and there, and its place had not been supplied yet with another. This irregularity adds much to the charm. A flowing artesian well gives ample supply of water for the Cottage. It was my good fortune to be at the Cottage on the evening of the Presbyterian church social gathering there, and was very agreeably surprised to meet so large and cheerful an assembly, representing all ages as in the families. Being harvest time, the names of many were mentioned as absent and much missed, yet it was a very creditable representation for literary and social qualities. Rev. Mr. Taylor and family seem highly appreciated by all.

Rough Places Made Smooth.

Prof. Buckman, former County Superintendent of Schools, is principal of the Nordhoff schools, giving them the advantages of academic teaching. Two years since, while recreating with the gun, in the upper portion of the lower valley of the Ojai, he conceived the idea of converting 160 acres of wild, rough, bushy, and somewhat rocky land, into a farm, and now has his happy little family comfortably housed, with acres of strawberries and hundreds of orange trees and other fruits growing. He is already accused of glutting the Ventura market with his strawberries. He has abundance of clear spring water to irrigate almost the entire farm, which is so sheltered from all west, north, and east winds, as to ensure a success in almost any line of cultivation, either of grain or fruits; and the hills above him are a bee paradise. It seems very strange that this valuable location had not been appreciated long before.

There are yet many such neglected spots in different counties, that may, by courage and industry, be changed to delightful and productive homes. I have mentioned this piece, or neck of land, partly because it is central and next to the upper Ojai, and supposed to be comparatively worthless two years since, and, today, is proving a small bonanza. Should I undertake to comment on the well-conducted farming of W. Pirie and C. E. Soule, or to expatiate upon the beautiful square fields of R. Ayes, with his full plank fences, inclosing fine-blooded cattle and hogs, and his huge barn, and stables, now occupied by two Norman-French horses, of the Theodore Skillman premium colts, of Petaluma fair, 1877; should I review any of these, and not make mention of some others as live farmers and stock men, there would be charges of partiality, and some of Mr. A. Everett's China and Berkshire importations would join their music with H. P. Flint's extra fine wools in lamentable strains; and even the city of San Buena Ventura

would be in an uproar, from the dust stirred up and the bellowing of Higgins' saucy little Jerseys, all because they did not get a slight mention of their characteristic virtues.

The Casitas Pass Road.

Connecting Ventura with Santa Barbara, is now nearly completed. It has long been talked of as a necessity, to avoid the running the gamut along the rocky shore at low tide. Mr. McKee, of Ojai, has the contract to build the Ventura side of the road, and now employs about 50 hands, and is doing a fine job. Mr. Chilson, county surveyor, does the engineering and surveying. The road is spoken of as well done for the small cash expended. I rode over it with a buggy, and though incomplete, found it much preferable to the ocean road; besides the scenery is elegant and varied. The next urgent need is the Newhall & Ventura railroad.

Corn and Beans.

Although troubled some by worms and some replanting being necessary, the present showing promises a splendid crop. I never saw any such rankness of growth and deep color as the corn shows in the Santa Clara valley; but for fear I was deceived I asked a newly-arrived New Yorker if he ever saw its equal there. "Oh no, nor anyone else; a small portion of southern Illinois comes near equaling it." Now the greater marvel comes in when you learn that the surface wells are so deep on many of these ranches that all the water they use is hauled in barrels for miles.

Canary Bird Seed and Flax.

Near Saticoy, in the great valley of the Santa Clara, I saw huge piles of flax headed and piled in loose stacks to be threshed; the seed seemed good, but did not learn the probable yield. Will Evans has 70 acres, Bruce Evans 65 acres, and Mr. Richards 150 acres. Canary seed is a very fine crop, and would probably aggregate 3,000 sacks. Some of it yields a ton to the acre.

Personalities.

Hon. Chas. G. Finney, lately elected to the Constitutional Convention, is the son of President Finney of Oberlin college, and seems to be ranked with the farmers who believe in advancement; and any lands he holds more than he can cultivate well, he makes it an inducement for some industrious man to cultivate on shares. He is turning all his land as fast as he is able into an orchard.

Your able Ventura correspondent, Rev. Mr. Bristol, is carrying on mixed farming and pretty carefully experimenting on fruit trees, and though age begins to shine on his locks, has an ambition of a Pauline character that would shame many a younger man.

I was disappointed in not seeing Roht. Lyon, who, being quite an invalid and crippled with rheumatism, was up at the sulphur springs near the Ojai. His letters have always aimed to say something practical and to the exact point. From his neighbor, H. Shaw, whose nursery covers immense orders for budded orange trees, I learned some interesting facts of Mr. Lyons' afflictions, and yet persevering to success both in theory and practice.

J. M. Egbert's pleasure gardens are very attractive; fruits and berries add much to the taste of the visitor.

Ex-Judge Milton Watson is everywhere highly spoken of as doing honor to the ermine during his long service as County Judge. He can now be found in the harvest field or in the corn-field, seemingly perfectly contented, Cincinnatus like, to return to the plow.

Lastly, for fear of occupying too much space, I would mention the name of the present judge, Eugene Fawcett. Like his predecessor, he seems to give satisfaction to the entire people, and if he had any politics in his election he has none in his official administration. There seems to be a universal belief that he is above any unworthy suspicion. To a county that is passing through the ordeal of murder trials that Ventura county now is, it is of vast importance that the very personification of justice should preside. And so far as these trials have proceeded, they have been able to empanel jurymen worthy to serve under such a judge.

Ventura has a future, and a brighter day dawning awaits her. There are active moral forces working for her good. The true value of real estate, or even of human life, cannot be estimated independently of the moral standard of a community. W. B. CROWELL.

A Visit to Sacramento County.

EDITORS PRESS:—"An honest confession is good for the soul." An acknowledgment of one's poverty often lessens the mortification attending the unveiling of it, that sooner or later is almost sure to follow. So be warned in time. You need not look for many special items at this season of the year, particularly such as are backed by facts and figures calculated to render them of much real value. When all are on the run, there is no time for interviewing.

In this locality, July is the busiest of busy months among the farmers. Some may must go to Sacramento, if it brings only \$8 per ton, or something near the cost of production and marketing. The golden grain from a thousand fields or farms must be cut, threshed and garnered. Fruits, vegetables and melons, keep all hands busy from early morn till late at night. If not gathered and sold as they ripen, they are a dead loss to producer and of no benefit to consumer.

If a stranger looking around the produce and

commission houses, or the numerous and well-supplied markets of your city, is ready to wonder whence come the

Great Variety and Abundance

Of berries, peaches, plums, apples, apricots, melons, cantaloupes, beans, cucumbers, tomatoes, and similar products, let him take passage some bright morning at Sacramento, on one of the freight steamers plying between that city and Sacramento. He must not be too anxious to see loved ones at home. If possessed of something of the meekness of Moses, and the patience of Job, his curiosity will be at least partially gratified. The boat lands it may be at Freeport, or Richland. The work for the day now commences in earnest. Basket after basket of fruit is taken on board; box after box, it may be of cantaloupes or tomatoes. Sack after sack of "spuds," or sweet potatoes. Watermelons by the wagon-load lie spread upon the banks of the Sacramento.

All hands form a line. That immense mass of melons, picking its way from man to man, melon after melon, is eventually all transferred to the boat. It is a tedious, but perhaps the only feasible process. Let it be repeated at Courtland, Walnut Grove, Isleton, and again and again at a dozen or more intermediate landings, and the passenger to relieve the tedious gracefully submits to the twentieth infliction of "Old John Brown." Distance lends enchantment to the music of the callopes, judging from the number of delighted listeners on shore. It is good enough in its way. So are the melons. It is the surfeit, that is all; but the traveler will land with some clearer conception of the quantity and quality of the lands lying along and adjacent to the Sacramento, American and other rivers of the country.

A single instance may be here given in illustration of the quick returns and large profits sometimes obtained from fruit culture. It is understood that an acre and a half of two-year-old peach trees, Briggs' Red May, brought Mr. Lufkin, of Freeport, the last season, the snug little sum of \$600. The fruit was early in market and commanded high figures.

In fact such is the richness of this alluvial deposit, although subject to occasional damage by flood, as last winter, that one favorable season is usually sufficient to set the farmer on his feet again, and to lead him to forget he ever had a drawback.

Some took time by the forelock and sowed

Alfalfa Seed in the Winter.

In some cases getting a well-set growth. Some experiments of sowing after the retiring of the water, proved failures, owing to the baking and cracking of the sedimentary deposit, and the consequent drying-out process. Where success attended after sowing, the soil was moist, and the conditions in other respects different, while the land was plowed and thoroughly prepared for the seed. As has been stated before in the Press, alfalfa is one of the most profitable crops of the county. The seed from 15 acres on the Consummes river, yielded, last year, \$1,300, paying the entire cash rent of about 400 acres of valuable land, besides giving Mr. John Pearson, the lessee, several hundred more in pocket money from a crop of hay previously cut.

One of the most noticeable features, not to say lovely aspects, are the fine green fields of waving

Indian Corn

Along the bottom of the Consummes and other rivers, reminding one of the Miami or Mississippi valley. The yield per acre may not come quite up to some of the best lands of Los Angeles county, but considering accessibility to market, from 40 to 50 bushels will pay handsomely, and is not to be despised in a season when small grain has suffered so much from rust and cheat as during the present; for the amount of good merchantable grain of this character will fall probably short of last year's product in the Sacramento valley. The overplus in the southern counties may make the total aggregate for the State somewhat greater.

Odds and Ends Said and not Said.

Did space permit, much might be said of the hop interest about Sacramento city, of the prolific growth of the strawberry and other of the smaller fruits, fineness of flour and other qualities to recommend them, grown in the vicinity, and more particularly at Florin Station on the line of the Central Pacific railroad. Some details should have been given of the orchards, vineyards, and shade trees ornamenting the farms and the many neat farm houses about Elk Grove and other stations along the railroads, as well as the comparative cheapness of land in view of market facilities. Poultry, sheep, wool, the dairy, and blooded stock generally, are important interests, and should have had some attention. Let one instance suffice as your curiosity may soon be fully gratified at the coming State fair. There will be a fine display and no exorbitant hotel bills to pay.

It may not be generally known that Mr. John Rider, of Sacramento city, importer and breeder, keeps on hand a small lot of very superior Berkshires. He takes a genuine pride in the business, buys and breeds none but thoroughbreds, with pedigree all carefully recorded in the "American Berkshire Record." In this way, the purchaser has a sure guaranty against imposition. If any reader has a passion for this kind of stock, and is an adept as to the proper size, form, and proportions, for an animal as perfect as may be under domestication, he will be more than pleased with Mr. Rider's exhibit at the fair. If he could have seen, as I did, a few

days ago, that fine litter of nine sleek, well-rounded pigs, playful as so many kittens, and prettier than any picture, he would almost have danced at the pleasure the sight afforded.

Among the inventions not yet introduced, may be mentioned a patent, secured through the agency of Dewey & Co., by Mr. C. Lee, near Florin, for preserving the wood-work of wagon-wheels, and avoid the necessity of setting, or frequent resetting of the tire. It consists of a groove, made in the face of the felloe, and extending round the wheel, the space being filled with oil, which can be replenished through a bolt-hole, drilled in the tire. A wagon may be seen on his place, which has been exposed to all the extremes of rain and sun for the past four years. The oil has prevented the wood from swelling and shrinking. The wheels are apparently in as good condition as they ever were, and what is more, the tire, it is said, has never been reset.

The Bisulphide of Carbon.

As recommended some time since, by Prof. Hilgard, has proved very successful in ridding the squirrels from Mr. Rontier's place, at Rontier Station, which, by the way, was found to be under a fine state of cultivation, and may be set down as a good representative of the many beautiful situations, or what might be made such, bordering on the American river, nearly the entire distance from Folsom to

The City of Sacramento.

A very visible improvement has taken place in more respects than one, since it was visited two years ago. During that time, it has gained much of the trade from the interior of the State, not to speak of remoter parts, and has put on a far more beautiful garb in the way of elegant private residences. It is understood that something upward of 100 will be pointed to as the work of the season.

As its business and surroundings have been so well and fully presented by Mr. Geo. Rich, your valued local correspondent, little more need be added. Taking the chances of being accused of stealing some of his thunder, a brief allusion may be excused to that charming spot of ground occupied by his neighbor, Mr. C. S. Lowell. Its budding beauty has probably bloomed out so gradually before his eyes, that it has failed to attract his attention. It is eligibly situated on a knoll, considerably elevated above the city, three miles from its limits. Here are the buildings, with their surrounding fruit trees, vines and flowers, saying nothing of the partially encircling hedges of the Osage orange, whose rich green tints are set off in fine contrast to the yellow of vast fields, far and near on the plains. It is a good illustration of what can be effected in four years by a little hard work and energy, as also of the rapid growth of trees and shrubbery in a climate and soil like this. The hedge, which is formed by setting out the plants from 18 to 20 inches apart, makes a complete fence against man or beast, and is so very attractive and permanent that it becomes a matter of wonder that so few are to be met with. On this place tobacco may be seen growing in great luxuriance, but the most noticeable object of all is the well-set and prolific beds of strawberries. Setting commenced a year ago last January, the first crop paying all expenses for labor. This year the picking season lasted about three months. As it would, in this case, be a violation of private confidence to give the yield in figures, it is sufficient to say that it was simply enormous, the quantity per acre being enumerated not by pounds or by the hundred weight, but by the ton. A. C. K.

Entrance to the State University.

EDITORS PRESS: Prof. Kellogg advertises in your columns that the examination for admission to the State University will be held early this month. Would that gentlemen, or some one connected with the corporation, inform your readers, 1st, at what age students are admissible? 2d. On what terms? 3d. What previous knowledge is necessary at matriculation? EDWARD BERWICK, Monterey, Cal.

EDITORS PRESS:—In answer to Mr. Berwick's inquiries, I would say: 1st. Students are admitted to the University at the age of 16; not earlier, unless for very special reasons. 2d. Tuition is free to residents of California. Students from other States pay a matriculation fee of \$25, a tuition fee of \$50 a year. Young ladies, as well as young men, are received as students. 3d. All candidates for admission are examined in arithmetic, algebra, to quadratic equations, geometry (four books), English grammar, rhetoric, geography, and the history of the United States.

In addition to these requirements, candidates for the literary course of the College of Letters are examined in the Latin grammar and reader, and in four books of Caesar.

For the classical course of the College of Letters, applicants are examined also in Latin grammar, Caesar (four books), Cicero (six orations), Virgil (Eclogues, Georgics and six books of the Aeneid), and the elements of Latin prose composition; in Greek grammar and prose composition, Xenophon's Anabasis (four books), and Homer's Iliad (two books).

More detailed information is contained in No. 6 of the University "Bulletin," which will be sent by mail to any one applying for it.

The University year begins to-day, August 8th. The examinations close with this week; and those who enter after the year has begun, will need to be examined on the work done already by the classes they enter.

M. KELLOGG.

Berkeley, August 8th, 1878.

Santa Cruz and Northward.

EDITORS PRESS:—Recently I jumped aboard the steamer *Ancon*, bound for Santa Cruz. After a delightfully-refreshing trip of seven hours, we reached the wharf of that famed resort, where we found at least a thousand expectant beings waiting the arrival of friends and relatives.

Strolling into town I soon began to realize that the importance of the place has not been overestimated. The number of visitors this season is greatly in excess of any of previous years, and the weekly trips of the excursion steamer *Ancon*, give a decided impetus to the town. Indeed, the inhabitants of Santa Cruz have every reason to be, and no doubt are, happy and prosperous, for they have one of the most beautiful locations in the State; a country round about immeasurably rich in its productions, and a climate whose seductive softness, regularity, and richness, induces a large portion of the vacation-taking world to rest its weariness under its balmy influence. During my stay I was cared for generously at the Wilkins house, by Mr. Wilkins and his hospitable wife, who, indeed, treat all their patrons most courteously, and minister to their wants satisfactorily.

On my way up the coast, I visited the dairies of Mr. Terry and D. E. Warner, distant three and six miles respectively from Santa Cruz. Each are at present milking 200 cows of mixed breeds, Jerseys and Alderneys predominating, and all averaging well. Judging from the prosperous appearance of these dairies, neither Mr. Terry nor Mr. Warner desire anything better. The butter made here is not inferior to any made in the State, and all the year round commands the highest price. Messrs. Terwilliger & Fink, of the Washington market, have the exclusive sale of Mr. Terry's butter, and Messrs. Manor & Bateman, of Santa Cruz, have the disposal of Mr. Warner's.

I took the narrow-gauge cars for Watsonville, and as the train speeded not more than 12 miles an hour, I had ample time to note attentively the condition of the grain crop along the road. The wheat and barley in the vicinity of Santa Cruz is clean and full, while closer to Watsonville, and, indeed, throughout the Pajaro valley, the rust had taken a slight hold of the wheat, almost wholly ignoring the barley. The shrinkage, however, will not be great, and the harvest will average fairly. The farmers, perhaps fortunately, were unable to sow much early grain, and in consequence a large average was devoted to green crops, which look finely.

Laud in the Pajaro valley, seemingly has a high value set upon it, being quoted at and selling for from \$75 to \$200 per acre; but on account of the surety of crops (they never fail here) and the high yield obtained therefrom, the price of land is comparatively fair. As an indication of the confidence placed in the results of the soil, I will state that on the farm of Mr. Theirwatcher, situated three miles from Watsonville, a man has this year paid the above-named gentleman \$900 rental for 42 acres, which had been planted with potatoes. Think of it, \$21 per acre rental! Who wouldn't have a farm here? But Mr. Theirwatcher himself has on the same farm netted \$600 from four acres of potatoes.

A look at the grain in Monterey county shows an enormous shrinkage, caused by rust. I estimate fully 50% on wheat, and about 20% on barley. The result will be poor. In Santa Clara county the crops are fine, although in a few localities rust has done considerable damage. On a farm seven miles from San Jose, near Evergreen, the threshers had just finished with 30 acres of fine barley which netted 1,608 bushels, say 53½ bushels to the acre. In San Mateo county the barley yield will be excellent, while the wheat will be poor. If I could take this little trip and a couple of others, one up north and the other around the bay, as an index of the condition of the crop throughout the State, allowing for a predominance of rust along the coast, I should say that California, this year, will reflect no discredit upon the fair name she has earned in the past.

In concluding, I will add that wherever I visited, the PACIFIC RURAL PRESS was highly commended for its great usefulness.

C. F. F.

San Francisco, August 5th, 1878.

HORTICULTURE.

Orange Growing in California.

Mr. Thos. A. Garey, of Los Angeles, widely-known through his zealous and intelligent efforts to build up the orange interests of our State, lately delivered a lecture at the Central California Colony in Fresno county on orange and lemon culture. From the copy of the lecture which has been kindly sent us we make the following extracts:

Will it pay to Plant Orange Trees?

I believe it will pay, and in support of this belief will proceed to give you some data in proof of my assertion. An orange grove in Los Angeles county in full bearing can scarcely be purchased at any figure. While all kinds of

property, all over our country, have perceptibly depreciated under the pressure of the times, the value of our orange groves remains unchanged and firm. No one wishes to sell an orange grove and few are able to buy; it takes a fortune to purchase one. An orange grove is a bank whose deposits are safe beyond question and whose dividends are regular, munificent, and, we might say, princely.

The income from an orange grove is the result of a safe, judicious, honorable and ennobling investment; it is continuous in its operations, resting neither day nor night. The crop never fails; the fruit is always in demand, and at remunerative prices. I find from a careful examination of San Francisco prices current for the season of 1877-78 that the average price for Los Angeles oranges has been \$22.52 per thousand. In the interim between 1874 and 1878 the price has never averaged less than the above figures. If it was required I could produce statements from all our orange producers corroborating the above prices. In our county a man who owns a ten-acre orange grove in full bearing is a wealthy man.

That there has been and is at present a market for the fruit at exceedingly remunerative rates is not questioned. That it will remain as profitable in the future is highly probable. Our oranges bring as much this year as they did in 1865. Our orchards have increased rapidly during the last ten years, and yet there is no reduction in prices. But we can afford a reduction of 50% from present prices, and still the business would be satisfactory. When prices are reduced, the quantities taken by the market will increase many fold. Who eat oranges at present? Only those who can afford to indulge in luxuries, and they even use them in limited quantities because of the cost. And again the avenues for successful transportation will be opened up more rapidly than our orchards can possibly increase.

Our oranges are very peculiar in their keeping qualities. They can be allowed to become ripe and sweet before picking from the tree, and yet stand transportation to long distances; while the Havana, Tahiti, Florida, and other oranges, must be picked green, in order to reach the market before rotting, making them tough and insipid, which is proven by the Tahiti oranges now in our markets. A San Francisco paper says: "The Tahiti orange crop is later in the market than the Los Angeles crop, and arrives at San Francisco in hot weather, in a damaged condition. The business has become quite unprofitable, so much so that California importers propose to abandon the trade. This change in commercial affairs will open the market for about 5,000,000 more oranges from Los Angeles."

There are authenticated instances of the successful transportation of our oranges to Europe, where they arrived sound and firm, a fact not to be overlooked. If Europe is to become the market for our surplus oranges, then no one need fear the glutting of our own markets. This should establish this business upon a permanent basis, and encourage us to plant orange orchards in all favorable localities.

Where can Oranges be Raised?

Can they be successfully produced in Fresno, and other counties of our State, outside of the now established orange growing district, is a question that interests all who contemplate planting an orchard, and also all who are interested in the development of the latent resources of our country. You should be the best judges as to the adaptability of this portion of the State for orange growing. The orange and lemon trees already growing, and in successful bearing in different portions of Fresno county, give unmistakable evidence that orange culture can be made a success. I will remark that the orange tree grows, and is healthy and prolific, even where ice forms one-half to three-fourths of an inch in thickness. The orange tree is not, strictly speaking, a tropical tree, but is semi-tropical, and, after attaining four to five years, will withstand quite heavy frosts. Hence, to succeed in a locality where ice forms, trees should be, say, two years from the bud, on four to five years old roots.

There is, perhaps, no one branch of horticulture that will enhance the value of land so rapidly as the planting of groves of orange trees. In Los Angeles and adjoining counties, this is well understood by our people, and several settlements and colonies have been established, and advanced to success upon the idea and plan of devoting a portion of the plat to orange culture. Some companies, in the upper portion of the State, are now offering water for irrigation free for a period of five years, to all parties planting 50 or more orange trees on their lands. These companies are moving in the right direction; the success of orange culture once established, and, like magic, the price of both land and water will advance.

Diseases of Orange Trees.

I shall quote on this point and others that follow in regular order from the report of the Committee on Semi-Tropical Fruits, made to the Southern California Horticultural Society, November, 1877, of which I have the honor to be Chairman, and with several members of the Committee examined nearly all the orchards of note in Los Angeles and San Bernardino counties. This report was received, and, after being fully discussed, was adopted by the Society. Under the head of "Diseases," we made the following report, from which I have found no reason to dissent:

"Your Committee found no diseases or other enemies in the citrus family of trees that need cause serious annoyance to the successful culti-

vation of semi-tropical fruits in the sections visited. The gum disease, or root disease, as it is generally called, is the only one that attracts attention. A few orchards are seriously affected by this disease, and a few large bearing trees are dying or are dead, and very few localities are entirely free from it. The disease is caused by the flow of sap in the tree, and generally appears at or near the root. The universal testimony regarding the treatment of orchards affected by this disease, shows that excessive irrigation and bad cultivation are at the foundation of the difficulty. Those orchards which are irrigated or flooded the most, and cultivated the least, are the most affected, especially when such orchard is growing on heavy soil. The better cultivated orchards are in a more healthy condition, and in localities where water is scarce and cultivation is more depended upon, the disease is rarely found in the orange. The lemon root is not so healthy, and is not being used to any great extent, as the budding of choice varieties on the orange gives a healthy tree, and a much superior fruit to the ordinary seedling. Occasionally the application of strong manures immediately around the tree has a tendency to develop the gum disease. If the diseased tree is but little affected, remove the cause and the tree will recover by paring away with a sharp knife the diseased part and coating over the wound with gum shellac. If the tree is badly diseased it is better to remove it, and plant in its place a more healthy and vigorous one.

The Committee find that the brown scale bug is not a serious enemy to the orange orchardist. They are not as numerous to-day as they were two years ago. It is evident that a better system of cultivation has made more vigorous trees, and a consequent decrease in the number of this insect.

Irrigation.

I quote from the Committee's report: "The systems of irrigation in use throughout the district are varied. Many use the old system of flooding the entire ground every three or four weeks, using water to the exclusion of cultivation. Others irrigate less and cultivate more. In fact, we find all phases of irrigation and cultivation, from all water and no work to all work and no water. Neither extreme is profitable, but in the golden mean of two or three thorough irrigations, with thorough cultivation, your Committee believe the orchardist will find the most successful work. On heavy soils the water should not touch the tree, and great care should be exercised that the ground does not bake after each irrigation.

Fertilizers.

"The soils of southern California are naturally rich and deep, and, in the opinion of your Committee, young orchards do not need fertilizers. After the orchard commences bearing, a light annual application of manures is beneficial. No strong manures of any kind should be applied so close to the tree that it will come in contact with the bark, and all manures should be thoroughly rotted before being applied to the orchard."

The cultivation of an orange orchard should be first-class; no slovenly work should be tolerated. There is no tree that shows the effect of good or bad treatment in such a marked degree as the orange tree.

Pruning.

"The Committee found a diversity of opinion on the systems of high and low pruning; that is, pruning sufficiently high to allow of cultivation under the branches of the tree, when grown, with an ordinary team. The Committee also find, that, with bearing trees, the top should be trimmed out so as to allow a free circulation of air and light."

Budding or Seedling.

On this important point, Mr. Garey alluded, at length, to the discussion by the Southern California Horticultural Society, in 1877. As we gave full abstracts of the discussion, we refer our readers to their files. Concerning the best stock on which to bud the orange and the lemon, Mr. Garey gave an extract from the report of the Committee on Semi-Tropical Fruits on this most vital point, lying as it does at the very root of successful orange and lemon culture:

"Orange stock is generally used for both orange and lemon orchards, as the orange root is healthier than the lemon. The lime root is also being used as a stock for both orange and lemon orchards, and, so far as tested, is proving satisfactory. The China lemon has been used for years as a stock for both orange and lemon, and some budded orange orchards on this stock are now in successful bearing. Up to the present time this stock has given very general satisfaction, but, in the opinion of the Committee, the orange root is to be preferred above all others for budding."

"J. De Barth Shorb said he endorsed the report of the Committee in regard to the disease in the lemon, but thought that it should have been put in still stronger terms, to the effect that the lemon root should be thoroughly condemned as an unhealthy stock for cultivation. He had lemons planted in land 150 feet to surface water; had cultivated his trees thoroughly, and for a time they were healthy, but now some are dying and some are dead; none are healthy, and it is a mere matter of a little more time when his entire lemon orchard will be dead. This disease was in the tree, and he considered the only remedy to be to bud the lemon on the orange root. The orange root is healthy, when properly cultivated, and the budding of the

lemon on that root has proven a success beyond question."

Choice Varieties.

Mr. Garey gave an interesting account of the success which his Mediterranean sweet orange and Eureka lemon were attaining, and the favorable mention made of them by the horticultural societies, in the RURAL PRESS and other journals.

THE DAIRY.

New Forage Plants.

EDITORS PRESS:—I send you, by to-day's mail, a head and leaf of each of some of the forage plants that I've been experimenting with for the past few months.

No. 1. Kennedy's amber Minnesota sugar cane. This has proved very valuable. I sowed four feet wide of this across my alfalfa fields. Animals ate that four-foot strip off closely before touching anything else, however green or thrifty the alfalfa may be growing on either side of it. I have several acres, besides, of it growing. That not fed off is a dozen feet in height, and a large portion of it has grown in the driest soil, without any irrigation whatever. My neighbor, E. M. Stevens, has an acre of it, that has been covered with water a half dozen times; still it is growing finely, showing that it is not liable to injury from excess of water or drouth. The roots are as perennial as alfalfa roots; it never has to be sowed but once, and it will produce, year after year, two-fold as much forage as alfalfa, and will neither burn up nor drown out.

No. 2. Italian millet (*Sectaria Italica*). This is not valuable as a forage plant. Stock neither eat it well nor thrive upon it. It produces a vast amount of seed, however, 40 or 50 bushels per acre with one sowing and irrigating, of which fowl of all kinds are very fond.

No. 3. Golden or German millet. This produces four or five tons of excellent hay per acre, from each sowing, but requires abundance of water; should be irrigated during growth at least four times to insure the best results.

No. 4. East India millet (*Penicillaria spicata*). I have just introduced this the present year. It will produce more pounds of forage per acre than can be raised from sowing Indian corn which has heretofore produced the greatest amount of forage per acre, or in any other way. The inclosed head is from a bunch of it, 10 feet high, and producing over 40 such heads from a single kernel of seed. Stock of all kinds like it; but its value per ton, as compared with other forage or hay, has yet to be determined.

No. 5. (*Panicum spectabile*), from Dr. Curl, New Zealand. This bids fair to become a valuable forage plant, each seed throwing out a score or more of leafy stalks of rapid growth, from four to five feet in height.

No. 6. (*Panicum hispidulum*), from Dr. Curl. I suspected when I received the seeds, from their appearance, that this would prove identical with a well-known grass of the tules. Its growth has so proven it. Its forage value is well known, and also that it is a terrible pest when it once gets a foothold on the rich corn lands, or garden lands of our State.

Prickly comfrey is a failure here. Manure and water are of no avail. It cannot be made to thrive anywhere near equal to the best of those mentioned above in the long, hot days of burning sunlight of our valley summer.

W. A. SANDERS.

Kingsbury, Fresno Co.

[Prof. Sander's specimens were received in good order, and are now hanging, properly labeled, upon our editorial walls, at 414 Clay street. They are very interesting, and all are invited to examine them. The specimens of the different millets are as handsome as we have ever seen. We trust Prof. Sanders will continue his notes of experiments of new plants, and specimens are always of value to us as object lessons for inquiring visitors.—EDS. PRESS.]

IMPERVIOUS CLOTH.—The *English Mechanic* says the Gastuch, or gas-cloth, is a name given by Dr. Hirzel, of Leipsic, to a gas and water-tight stuff, which he has recently patented. This is produced by placing a large, smooth piece of so-called gutta-percha paper between two pieces of some not too coarse and dense material—e. g., shirting (undressed)—and then passing the arrangement between heated rollers. The outer pieces of shirting combine in the most intimate way with the inclosed gutta-percha to form a material which is impenetrable by gas and water. It may be made still denser and more resistant by being coated on both sides with, e. g., copallac. The substance is conveniently flexible, and will remain proof against variable influences of weather and external temperature. It can be applied to all those purposes for which water-proof material is used, and it is well adapted to form gas-tight membranes for regulators of pressure of compressed gas, bags or sacks for dry gas-meters, as also dry gas reservoirs.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Worthy State Lecturer's Appointments.

Name of Grange.	County.	Time.
Sable Bluff.....	Humboldt.....	Monday, August 19th
Ferndale.....	Humboldt.....	Wednesday, August 22nd
Mattole.....	Humboldt.....	Friday, August 23rd
Calder.....	Mendocino.....	Tuesday, August 27th
Potter Valley.....	Mendocino.....	Thursday, August 29th
Lakeport.....	Lake.....	Saturday, August 31st
Cloverdale.....	Sonoma.....	Monday, September 2d
Healdsburg.....	Sonoma.....	Tuesday, September 3d

San Bernardino Grangers.

EDITORS PRESS:—The Quarterly Convention of Grangers of San Bernardino county met publicly at Riverside, July 27th, 10 A. M. Roe's hall was the place of meeting, one wall of which was decorated to suit the occasion by a festoon of grapevines, enclosing a motto in yellow corn-grains on black velvet, "Long live the Grange," and by a wreath of barley and flowers. Some 75 persons, including children, were present.

Bro. George Lord, of San Bernardino, presided. Bro. John Hall, of Riverside, read a list of desirable amendments to the Constitution of California, collated from different sources, he making comments thereon.

Bro. James Boyd, of same place, read, and commented on favorably, some portions of the Constitution; suggesting in others some changes which might, he thought, be made with advantage. Among other things, he was in favor of limiting Chinese immigration.

The harvest feast was then partaken of, a few Grange songs were sung, and then Bro. Taylor, of Rincon, spoke on the subject of the amendments to the Constitution.

Bro. Price, of Riverside, made a few remarks on the same subject, differing on the Chinese problem with Bro. Boyd, and favoring universal freedom.

Mrs. Waisbrooker said she thought the law-makers should furnish the lawyers free.

Thanks were voted to the ladies of Riverside for their exertions in providing the feast, which Bro. Lord designated as the best of the kind he had ever attended.

The Grange then went into private session. Convention adjourned to Rincon, last Saturday in October, 10 A. M.

Riverside, August 5th.

Settlers' Meeting at Hanford.

EDITORS PRESS:—The following minutes of a settlers' meeting at Hanford, Tulare county, August 10th, one of the largest ever held there, are furnished for general circulation. At a mass meeting of citizens held at Hanford, to take into consideration questions regarding railroad lands, J. N. Patterson was called to the chair, and L. C. Hawley appointed Secretary. J. J. Doyle and others addressed the meeting. On motion, it was resolved to hold a citizens' meeting at this place, on Saturday next, at one o'clock, P. M.

A committee of three was appointed to draft resolutions in reference to the railroad grader, Mr. Clark.

The committee, T. J. McQuiddy, J. J. Doyle and Thomas Chivers were requested to report immediately. Their resolutions were adopted unanimously, and will soon be furnished to the press.

Before adjournment, it was resolved that the minutes of the meeting be sent to the press for publication. J. N. PATTERSON, Chairman.
L. C. HAWLEY, Secretary.

The Fair Season.

The following is a partial list of the coming fairs. We shall be pleased to add to it if readers will send us the dates and locations of their respective exhibitions:

- San Francisco Mechanics' Institute, San Francisco, August 13th to September 14th.
- California State Agricultural Society, September 16th to 21st, inclusive.
- Oregon State fair, at Salem, October 8th to 18th, inclusive.
- Nevada State Agricultural, Mining and Mechanical fair, at Reno, October 7th to 12th, inclusive.
- Montana Agricultural, Mineral and Mechanical fair, at Helena, September 23d to 29th, inclusive.
- Sonoma and Marin district fair, at Petaluma, September 23d to 26th, inclusive.
- San Joaquin valley district fair, at Stockton, September 24th to 26th, inclusive.
- Northern district fair, at Marysville, September 23d to 25th, inclusive.
- Golden Gate district fair, at Oakland, September 9th to 16th, inclusive.
- Napa and Solano district fair, at Vallejo, September 3d.
- Monterey county district fair, at Salinas City, October 8th to 12th, inclusive.
- Siskiyou county fair, at Yreka, October 2d to 5th, inclusive.
- El Dorado county fair, at Placerville, September 13th to 15th, inclusive.
- Santa Clara valley fair, at San Jose, September 30th to October 5th, inclusive.
- Stanislaus County Stock Growers Fair, at Modesto, October 9th to 11th, inclusive.
- Southern California Horticultural Fair, at Los Angeles, October 14th to October 19th, inclusive.
- Southern California Agricultural Society's Fair, at Los Angeles, October 14th to October 19th, inclusive.
- Plumas, Lassen and Modoc District Fair, at Susanville, Lassen county, October 21st to 25th, inclusive.

The Mining Debris Trial.

(Continued from Last Week.)

G. F. Allardt, an Oakland civil engineer, had made last month observations for plaintiffs. He had examined Bear river at various points, finding its velocity at one point great enough to carry rocks weighing from 60 to 70 pounds, and calculating, by the evaporation method, the amount of sediment carried to vary from about 1 1/2% to 6% of the weight and volume also. He had never seen slickens anywhere but in hydraulic mining localities. Had seen good corn on debris land.

A. T. Arrowsmith corroborated Allardt's testimony.

The prosecution having finished, the defense moved for a nonsuit on the ground that the injuries alleged in the complaint had not been proved, and that if damages did exist, the damaged parties had ample remedy at common law. The prosecution argued in reply, that this was a leading case, that the matter should be tested, and that the agricultural is the paramount interest of the land and should be protected. The defense in turn argued that the miners had a right to deposit their tailings in Bear river, that they were pursuing a lawful occupation in a lawful way, and had been doing so from the earliest history of the State. The Court, after reviewing the arguments, denied the motion for nonsuit.

The defense then proceeded. An official map, representing the whole of Bear river valley and the watershed, also all the claims named in the complaint, was accepted as evidence. Senator Sargent gave a history of mining in Nevada county, the number of inhabitants in 1852, and since then, the amount of gold in their claim, and other points in detail. He said that hydraulic mining had been carried on ever since they owned the claims; that its stoppage would throw half the inhabitants out of employment and bankrupt the county.

E. H. Gaylord estimated the population near these mines at from 5,000 to 6,000. The mining property, exclusive of quartz claims, assessed in Nevada county, is about \$2,500,000. To stop the mines would injure the county greatly.

George F. Jacobs, a resident in the county for 27 years, and at one time an owner in the Quaker Mill claims, testified that their claim had been hydraulicked since 1857, and that, during the past 19 years, the gross yield of gold from them had been about \$60,000 per annum.

J. S. Stone, a Gold Run miner, and Superintendent of the Cedar Creek mining company, testified to the universal employment of the hydraulic process in the districts in question. The Budsey Creek mine he estimated at \$500,000. The company have been in possession of the same since 1871. The Cedar Creek property was worth \$500,000; income during the past year about \$50,000; not one-tenth of the material taken out yet, he thought. The quantity of gold taken from the district amounts to \$40,000,000 or \$50,000,000. There is much yet to be taken out. There are between 450 and 500 people supported by these mines. A stoppage would work great injury.

J. B. Hunter, from San Juan ridge, familiar with the working of hydraulic mines since 1855, testified to the universality of the hydraulic process. It was, he said, the only proper and reasonable method. They employed men to a greater extent now than in early times, and these men had their families there, and subsisted on the working and income of the mines. He said the Blue Lead channel was 30 miles long, 30 feet wide, and 100 feet deep, and would pay about 30 cents per yard. Necessity regulates the working of the claims. North Bloomfield is among the most profitable mines in the county. Did not think one-tenth of the blue lead had been worked out. Could not call to mind a claim that had been abandoned on this range, and would not pay.

V. A. Bell knew from observation that all hydraulic claims were worked on the same basis; they must have a place to deposit their tailings in order to work their mines to advantage. He said the old blue lead was 28 to 30 miles in length, and ranged from 300 to 400 feet wide, and from 150 to 300 feet deep. The average worth of this land or lead is \$150,000 to \$200,000 per acre. There are probably 150 to 200 claims located on this lead. Did not think one-tenth part of the ground had been worked out. He said the product of that mine last year was about \$380,000, and this year they had taken out, up to the present time, \$305,000. Witness said the population of Nevada county depended almost entirely on the working of the mines. Did not think it would be worth while to keep up a county organization, if the mines stop work. There have been large and extensive ditches constructed to bring water to these mines. Considered the sediment from these mines, where used in small quantities, a good fertilizer, and where put on land, had produced clover, corn, and beans. The cereals had grown well there. Witness said he belonged to an association of miners, whose purpose was to contest this suit.

Abraham Neece, of Santa Rosa, brought out no new points.

George T. McLean gave no further enlightenment.

Gen. A. M. Dobbie had been familiar with mining since 1849. The custom of dumping tailings in the ravines and streams was general, and was the only way these mines could be worked to advantage and profit. Mining dis-

tricts were not all governed alike. Did not know of any law compelling miners to work in a certain way. Witness said he was interested in the North Bloomfield company. Was not a member of the organization to contest this suit. Said the North Bloomfield company had tried drifting, but it would not pay to work by that process; the hydraulic was the only process that would pay.

E. L. Bradley, of San Jose, formerly of Dutch Flat mining district, was interested in a claim in that district. Was at one time owner of nearly 20 claims. Sold them to an English company for \$480,000.

Nothing new was developed from the testimony of Andrew Laisen, O. U. Lee, S. B. Hariman and J. H. Lekamp.

Hamilton Smith had been manager of the North Bloomfield company's works for several years. He estimated the product of hydraulic mines in the State at between twelve and thirteen millions in 1876, and between eleven and twelve millions in 1877, and thirteen millions or more in 1878. That the mines now being worked by the hydraulic process would not pay to work by drifting or other process. The North Bloomfield company tried the experiment of drifting, and it cost them \$2.25 per cubic yard to get the deposit worked, while by the hydraulic system it only cost about five cents. He said the hydraulic mines represented about one-fifth of the taxable property of Nevada county. Had examined the Bear River country, and the land of plaintiff. He gave a description of the sedimentary deposits and the levees built. Witness said the present levees would protect the land against ordinary floods, and they could further protect them by increasing the size of the levee. Early mining had washed down lighter material than that coming now, and much of the old deposits would continue to wash down with each freshet. Did not believe much of the sediment or sand would pass the dams in the river hereafter. Witness said the drainage area of the Bear River valley is 350 square miles, and the rainfall about 54 inches. In 1861-2 there was 22,000,000 inches of water discharged by Bear river into the plains. Computed the amount of gravel and sedimentary deposit in Bear River valley at 86,000,000 cubic yards. He was clearly of the opinion that to stop working the mines would not stop the flow of sediment. He did not consider the method of Mr. Allardt in computing the amount of solid matter in the water correct.

Prof. Wm. Ashburner said hydraulic mines must have pressure and dumping ground to work successfully. There was no difference between the sediment in the Bear river and that in the Yuba and other similar streams. He thought sand and soft clay would make a good fertilizer. Thought most of the deposits in Bear River valley came from winter freshets and storms. He gave the amount of debris deposit in Bear River valley at 86,160,360 cubic yards. Witness said he thought Mr. Allardt, in his estimate of solid material carried in the water, was about five times too much.

On cross-examination, Ashburner gave the requirements of good soil, and his theory of the formation of the old river beds now being worked for gold.

Additional testimony will be presented in our next issue.

AGRICULTURAL NOTES.

California.

ALAMEDA.

GOLDEN GATE FAIR.—*Times*: The managers of the Golden Gate district fair, to be held in Oakland next month, have published a pamphlet of 48 pages, containing a list of the premiums offered for exhibits of agricultural and mechanical products, and live stock. The list is divided into seven departments. The first is devoted to live stock, and comprises horses, cattle, sheep, goats, swine and poultry. The second department is devoted to mining, agricultural and other machinery, to tools and household implements, and to vehicles. The third department to textile fabrics and the materials from which they are made. The fourth department to mechanical products and California inventions, designs, etc. The fifth department is devoted to agricultural products. The sixth department to horticultural products. The seventh department to fine arts, etc. The premiums aggregate over \$25,000. They range from a silver pitcher worth \$150, for the best herd of thoroughbred cattle over two years old, to consist of one male and four females, owned by one person, down to \$2 for the best of certain kinds of vegetable. The highest premium for any single exhibit is a silver pitcher worth \$100, for the best bull of any age or breed; a similar premium for the best cow of any age or breed, and a similar premium for the best bull and three calves under one year old. Premiums of \$100 each are also included in the list for "the best collection of paintings by one artist," and "the best collection of paintings by any one exhibitor." The list shows that the managers of the association have provided for the carrying out of their intention at the time of the organization of the association—the encouragement of agricultural and mechanical industries and fine arts. The fair opens 9th of September, and closes on the 14th of that month. Entries close at 5 P. M. on the day of opening.

THRESHING.—*Cor. Washington Independent*:

Mr. Nicholas Gading has a very nice farm of about 200 acres, situated a mile from Mount Eden. They had just finished threshing, and the yield of the land was beyond their expectations. In our ramble about the place a field of 30 acres was pointed out to us, which produced 1,201 large sacks of barley, or about 1,500 cents. We were very much surprised to see so many sacks of grain from a field of that size, but we were much more surprised to learn that it was all threshed in one day, on the 27th of July last. This mammoth day's threshing is the largest that has ever been accomplished in this valley. The great feat has been performed a great many times in some of the upper counties, where they thresh nothing but headings, but here where they thresh bound grain it has never been equaled; and in this case there was about 20 loads of rakings, which took just as long to separate, and did not yield as though there had been that many loads of bundles. Our curiosity being considerably aroused at the sight of such a large pile of grain for one day's work, we concluded to make a visit to the machine and see it at work, and also make some inquiries as to how it was done; and to this end we started the following day for the ranch of Mr. George Meyer, which is handsomely located near Mount Eden. They had been threshing since morning, and a sack pile with over 600 in it was to be seen. The machine is the property of Mr. David C. Banc, of Centerville. It is a Pitt separator, with a 36-inch cylinder. The motive power is furnished by a Hoadley engine, with one of C. I. Hall's strawburners attached to it. As a straw-burning attachment, the one patented by Mr. C. I. Hall is perfect. It was severely tested on that day, and proved to be a success, for at noon the packing around the steam chest and other places gave out, and enough steam escaped to run two engines. Still, there was always plenty of steam on hand to give all the motion that was required.

BUTTE.

THE CROP ON THE RANCHO CHICO.—*Record*, Aug. 10: From Mr. Abram Bidwell, the Superintendent of the Rancho Chico, we learn that the barley crop is all threshed and has given a very fair yield of clear nice grain, amounting to 19,000 bushels. The wheat crop will not equal the yield of last year, some having been overflooded. Last year a field of Tuscan wheat that went 47 bushels to the acre, only went 42 this year. Other fields which went 20 and 30 bushels, gave a little more than half this year. The barley crop is superior in quality and yield to that of last year. The harvest operations on the Rancho Chico will close next week.

CONTRA COSTA.

EXPORT WHEAT SHIPMENT AT ANTIOCH.—*Gazette*, Aug. 10: The finding of twenty-two feet of water in the shoalest parts of the North Middle Ground channel in the recent survey made by General Alexander, demonstrates the feasibility of making Antioch a point of export shipment for the wheat products of the San Joaquin valley, and the people of that place are encouraged with reasonable hopes of securing their concentration there for that purpose. Terms have been arranged for obtaining a tract of land adjacent to the town on the East, for a company organized or about being organized, to build warehouses, wharves, and provide other necessary structures for the business, and it is said that the railroad company will build a branch from their main line to the point, and deliver grain and other produce there at proportionately less freight charges than they will take it to Oakland. The open barges and small steamers that cannot safely venture to cross the broader water of the Bay will be available in the concentration of grain at such an interior point of export shipment; and we can see no difficulty in the way of its being done, if the objections of underwriters and owners to sending ships to a new and unusual point inland can be overcome, as they doubtless can be if the wheat buyers desire to load ships there.

GOOD HILL YIELD.—From sixty-five acres on the high hills within a pistol shot west of the Martinez school house, John Fitzgerald raised, and sold on August 7th to Messrs. Fish & Blum, at the highest market rate of \$1.65, ten hundred and thirty cents of choice, clean milling grade wheat; and this is a pretty good turn out from a little high hill farm.

HUMBOLDT.

CROPS.—*Times*: Three or four weeks ago the opinion was held and expressed by many that the crops in this county would fall far below the average. The heavy fogs, at times amounting almost so rain, have wrought a decided change not only in the appearance and promise of the crops, but in the opinions entertained in relation to them. In some localities it is still true that the yield will be below the average, but all through the Eel River valley and the bottom lands generally, the crops look thrifty and healthy, and promise fully an average yield, and in some instances it will be even better than that. No blight or disease of any kind has as yet made its appearance among the potatoes.

LOS ANGELES.

AN EXTENSIVE PURCHASE.—Los Angeles *Star*: Lewis Wolfskill, Henry Dalton, and Guadalupe Z. de Dalton, with James B. and David H. Seawell, Thomas W. Hudson, James N. Wiley, Thomas H. Rickman, George W. Parke, all of Sonoma county, and Wm. A. Sprinlock and G. W. Morgan. Agreement for sale and purchase of the rancho Azusa, and all

right, title and interest of parties of first part to rancho addition to San Jose, and rancho San Jose, as follows; J. B. and D. H. Seawell, each 1,250 acres; Hudson, 1,500 acres; Wiley, 560 acres; Rickman, 250 acres; Park, 100 acres; Morgan and Spurlock, each 2,055 acres. Wolfskill reserves 2,500 acres, excess, if any, in same proportion; \$13,000 cash (paid); \$22,000 in 60 days; balance, \$105,000, one and two years at 10% per annum; deed after second payment; possession to January, 1879; rents and crops, except half of orange crop, reserved. Consideration, \$140,000.

EXPORTS OF HONEY.—Messrs. Eugene Germain & Co., are dealing extensively in honey this season, and we are glad to learn that they are handling it in such a systematic, thorough-going way as to establish a good name for the Los Angeles product, and in time, to build up an immense trade. They have already this season contracted for 300,000 pounds, and we believe, are still buying all that is offered at market rates. Upon receiving the honey in an extracted form they pour it into a large settling tank of 3,000 pounds capacity, and this securely covered, is left exposed to the rays of the sun for a day or so. By this process all impurities are eliminated, rising in a sort of froth to the surface, and the pure honey is drawn off through a cock at the bottom of the tank. It is then put up in neat tin cans containing two pounds each, and securely closed with solder. The cans are labeled, "2 lbs. pure Los Angeles honey, put up by E. Germain & Co., Los Angeles, Cal." These cans are in turn packed in cases of two dozen each, and thus exported. Messrs. Germain & Co. will ship this year almost altogether to Liverpool, England. Should the trade demand it, they will put a part of their honey in convenient sized kegs, but in any event they will pay strict attention to having each package securely labeled so as to maintain the standard of the article. This house is doing a good work for our honey interests, and we hope to see them attain the full measure of the success which they merit.

MARIN.

DIVISION OF THE SHAFTER PROPERTY.—*Journal:* Hon. J. McM. Shafter will survey his vast landed estates in this county preparatory to offering them for sale, which he has determined to do. This is the best piece of news for this county ever told, as it means a degree of prosperity which can never be attained under the present system. By the tenant system, which has ruled and still does rule this county, every item of public improvement is held in abeyance. Not that our great landlords are grasping or selfish. We do not think they are. But it needs no argument to show that the prosperity of the country will increase ten-fold the moment our numerous tenant ranches are changed to proprietary homes. We know of several districts where new school houses would be erected at once under this change. But how can men build school houses who know not where they will live next year? The heirs of O. L. Shafter will be all of age in a year or two, when it is probable the estate will be divided. And if the Hon. J. McM. carries out his present intention, Marin county will soon present one of the most inviting fields for men of industry and moderate means to be found in the world."

NAPA.

BERRYESSA SHIPPING WHEAT TO NAPA.—*Reporter:* We are told that many of the farmers of Berryessa are shipping their wheat to tide water at Napa. Mr. Grigsby has three six-mule teams running regularly. Mr. Abraham Clark has lately had two wagons refitted, and another made entirely new at the shop of Messrs. Wright & Fowler. Mr. J. H. Bostwick has just had finished, by the same gentleman, eight large wagon bodies, and H. J. Tully had a wagon repaired at the same shop. All these wagons are to be used in freighting the wheat product of Berryessa to Napa. We trust that the Board of County Supervisors will see that the county road to Berryessa is kept in proper condition, and then we may expect to retain this immense trade.

SACRAMENTO.

NOTES.—EDITORS PRESS:—The continued success of growth of semi-tropical fruit in the Sacramento valley will have the effect of increasing the number of trees the coming fall and winter. The branches of the fruited trees hang in thick clusters. Trees of Garey's Mediterranean sweet orange will bear to some extent, and will show the difference of growth and flavor to those raised south. One of the fine varieties of ornamental grasses grown in the gardens is the *briza maxima*. Seeds were received from Mr. Vick, of Rochester, last fall, and have matured perfectly. It is, I think, quite an addition to the many varieties of garden plants. Construction of a balcony at the pavilion for the use of State fair has commenced. Secretary Beck is busy at the stock ground, receiving animals and arranging stalls for them. From now on, work will be speedily pushed to prepare for the twenty-fifth annual fair, that opens on the 16th and ends the 21st of September next. A cattle amphitheater is ordered to be erected on the stock grounds, which is an improvement much needed. Rust in barley fields is reported in Yolo county to be quite serious. Hugh Larue's crop, which had grown finely, had to be left standing in the field. Alfalfa crops will be light; hops medium.—G. RICH.

SAN DIEGO.

BANANAS.—*Union,* Aug. 3: We have just tasted some of the dwarf Cavendish bananas

grown in the nursery of Mr. J. M. Asher, on Fifth street, in this city, and having tasted the fruit, we are prepared to state that these are positively the finest bananas we have ever eaten. Mr. Asher has fully demonstrated the success of banana culture in San Diego. He now has between 30 and 40 bunches, in all stages, from the first bloom to the ripening fruit, averaging over 100 bananas to the bunch.

SAN JOAQUIN.

CROSS-PLOWING AND EARLY SOWING.—*Stockton Independent:* As the harvest approaches a close, our attention naturally turns to seeding for the next crop. A large acreage of land was turned over last spring as summer fallow, and this will receive the first attention of the grain farmer. Probably some of it may already have been crop-plowed; but as it generally has not been customary to cross-plow in this State, we fear too much of it lays just as the breaking plow left it. Some of the best wheat farmers have experimented to test the utility of cross-plowing, and the result, we believe, has been universally satisfactory. In a season like the present, when the breaking was generally done before the moisture had died out of the soil, cross-plowing becomes of the greatest moment. The cross-plow should start as soon as possible, so that the grain may be in the ground to receive the benefit of the first rains. It has been proven that the earliest wheat to ripen this year was the least damaged by rust. We think this has been the general experience whenever rust has appeared in the wheat in this State. This fact should stimulate farmers to sow early, and on soil well prepared by tillage. Another consideration in favor of well-prepared soil and early sowing is that less seed is needed. These two points are good ones to make, and those who make them will most likely come out first best at next harvest.

THRESHING.—The farmers in this vicinity are complaining of the scarcity of grain threshers. Most of the threshers have gone to the West side this year, where they get more for threshing than they can about here. We are told that a very small percentage of the grain in this county has yet been threshed, which accounts for the fact that so little wheat is arriving in town by teams, the daily arrivals not being more than about 500 tons.

SAN MATEO.

CROPS.—*Times,* Aug. 3: But few fields in this county have been threshed, but from them it is quite difficult to derive a general rule for estimating the average yield of this year. In some fields cheat has perceptibly diminished the anticipated yield. In others the grain did not fill well. In a few there is a general failure, but all unite in saying that the average yield is a good one. In some of the fields the largest crops ever known in this vicinity have been harvested. While some farmers have been unfortunate in total or partial failures, most of them are very well satisfied.

SANTA CRUZ.

PAJARO VALLEY.—*Pajaronian,* Aug. 1: Mark Hudson piled us into his buggy, and made a tour of the upper part of the Pajaro valley. At the upper Nugent place we found Charles Fowler finishing threshing. This place is rented the present year, and will yield over 2,000 sacks of barley. Chris. Peterson was stacking his wheat, being afraid that if he bound it some miscreant would set it on fire. On a portion of W. F. White's land, W. H. Rowe was threshing for Dehart. The crop is light. On the Nugent place we noticed a healthy field of beans. There are many bean fields in the upper valley, and they are all looking well, except a tract on the Riverside nursery, planted between the trees. Mr. Pierson gave as a reason for the failure of this lot that they were killed by a rot. He pulled up some of them and the roots were perfectly dead. Some farmers claim that they are killed by gophers, but Mr. Pierson inclines to the opinion, as the blight is so general in his nursery tract, that it is a dry rot. We have not heard of any other field being stricken the same way. Tim McCarty has a heavy crop of corn, and his wheat yield promises to be very good. I. M. Clark has a large tract of good corn. Rianda, up on the mountain, has a big crop of wheat. Coming down the valley, along the river, rust is common, some places being scarcely worth the cutting. Mr. Grimes' wheat is affected with the rust, and he has left a belt of it standing. Near Willoughby's we saw a tract unfit to cut, being covered with rust. The bean fields outside of the Riverside nursery look splendid. Potatoes also appear flourishing, and an immense yield is predicted. M. S. Lopes has bought the apricot and plum crop in the nursery, and is busy picking. Fruit crops are good. The valley looks better than expected, and a half crop of wheat is assured, while barley is nearly a full one. In Green valley and around Corralitos all crops are good, wheat being better than elsewhere in the Pajaro. This valley intends to ship lots of grain, potatoes and beans this year.

SOLANO.

RIO VISTA.—*Enterprise,* Aug. 10: The winter sown grain is turning out much better than the summer fallow or volunteer. We learn from Rev. Mr. Barkway that 160 acres on the Gleason tract near Bird's Landing, turned out 1,800 sacks, while 140 acres on the Hooper tract, farmed by Ed. Young, produced 1,900 sacks. Emery Upham's crop was of an average with the above. Robert Donnals had the largest yield of hay, he having sold 200 tons from 90 acres, besides preserving enough for his home use.

SONOMA.

MILDEW.—The vineyard at de Wiederhold's (the George Miller place) North Healdsburg, covers a ridge and extends down the two sides; on the very crest a few rows of Sweet Waters are situated, and the fruit of three of these rows is almost entirely destroyed by mildew. We have not learned of any more cases in this section.

STANISLAUS.

THRESHING.—*Modesto Herald,* Aug. 8: Mr. Thomas Young has accomplished one of the greatest feats in the threshing line yet recorded. With a 36-inch cylinder Pitt's threshing machine, in one day, on the ranch of W. S. Stone, near Tuolumne City, he threshed 1,535 sacks of grain, each sack containing two bushels and one peck, making a total of over 3,453 bushels. That's the way work is done in this part of the State. The engine used is an eight by ten Hoadley, with King's straw-burning attachment. This is the biggest day's work ever done with a 36-inch separator, and reflects great credit on Tom's crew.

VENTURA.

RYE.—*Press,* August 3: This season has not been altogether a successful one for those of our farmers engaged in wheat growing. We would suggest that our soil is well adapted to other crops equally, if not more valuable, than wheat, and it would be better to change front and secure a sure crop. On this point we are informed that E. Skaggs, of Santa Paula canyon, has tried the experiment of raising rye, with a successful result. From five-eighths of an acre he harvested 900 pounds of good, well-filled rye, it standing from five and one-half to six feet in height. It is estimated that about one-fourth the yield was lost in getting it out, the threshing having been done by tramping the grain out with horses. It is probable that this grain would do well in any part of the county, and it is said to be fully as profitable as wheat.

WATER AVAILABLE ON THE OJAI.—*Press,* Aug. 10: Robert Ayers, on the Ojai, has succeeded in getting a good flowing artesian well at a depth of only 90 feet. On Mr. Montgomery's place, an adjoining farm, another well has been put down, and at a depth of 93 feet plenty of water obtained, though it does not rise to the surface by six feet, the ground lying about 11 feet higher than at Ayers' well. These strikes seem to indicate that an abundant supply of artesian water can be obtained in the Ojai valley at small cost. The water is said to be comparable to that of the crystal springs in the Sierras.

YOLO.

THE CROP OF YOLO.—*Mail,* Aug. 10: We are not aware of the number of acres of wheat sown in Yolo county for the year 1877-78; nor have we the data from which to make anything like a fair estimate; but from the best source at our command, we estimate the yield of wheat per acre at 10 bushels, and must say the quality is poor in comparison with that of 1876-77. The surplus for shipment will probably be about 30,000 tons. Barley is better. The yield per acre will probably reach 20 bushels, and the surplus for shipment will not exceed 10,000.

Nevada.

GOOSEBERRIES.—*Eureka Sentinel,* July 23: We are indebted to Mr. Brophy, of the Hot Springs, near Mineral Hill, for a sample of what his ranch is capable of doing in the berry line. A sprig, perhaps 18 inches in length, must have carried all of a quart of berries, as large and perfect as any ever grown in California. Mr. Brophy has also in his garden, apples and peaches as large as an English walnut.

Oregon.

HUNGARIAN WHEAT.—*Willamette Farmer,* Aug. 2: Several years ago Salem Flouring Mill company imported from France about a hundred bushels of this wheat for the purpose of inducing its cultivation in Oregon. The seed was distributed in small lots to farmers in this county, it being of greater value than other wheat, as it possesses great strength and whiteness, being used for making macaroni and vermicelli, and also there is manufactured from it the celebrated Triest flour, the best made in Europe. So far the wheat sown has generally answered all expectations, yields well, matures early and is a strong plant, and can be sown either in the fall or early in the spring. Mr. Kenney thinks there will be 30,000 bushels of Hungarian wheat raised in Marin county the present year, and also about 5,000 bushels in Yamhill, and some have sowed it in Linn county. Lewis Savage and Durbin Bros., near Salem, have about 100 acres each and are much pleased with it. Salem Mills pay five cents per bushel more for Hungarian than for other varieties of wheat. Last week we alluded to this as Australian wheat, which was a mistake. Those desiring to procure seed can do so from farmers in Marin county, or Salem Mills will exchange it for other wheat, as they are desirous to see it in general cultivation. The object on the part of the millers is to increase the strength of Oregon wheat.

TO PRESERVE LEATHER FROM MOLD.—Pyroligneous acid may be used with success in preserving leather from the attacks of mold, and is serviceable in recovering it after it has received that species of damage, by passing it over the surface of the hide or skin, first taking due care to remove the moldy spots by the application of a dry cloth.

News in Brief.

THE Kansas wheat crop is especially fine. FLOODS in India are causing great distress. THE Hawaiians are complaining of too much rain. THE Bear Paw placers are said to be worked out. A NEW cuban loan will be issued in Madrid soon. THERE has been a fresh outbreak of natives at Acheen. GREAT mortality is reported on the west coast of Africa. THE citizens of Yuma have had a touch of the Indian trouble. THE treaty of Berlin has not brought entire peace to Europe. JOHN II. P. HOYT, of Michigan, has been appointed Governor of Idaho. THE Estremadura insurgents have been defeated by General Dalmarie. CUBAN merchants and planters complain of the high Spanish duties on sugar. THE grasshoppers cannot damage Minnesota crops seriously this season. A NEW palace is to be built for the King of the Sandwich Islands at an expense of \$50,000. SPARKS from a thresher burned up about \$7,000 worth of property on Arque's ranch, Hollister. SMALL-POX is prevailing in Salt River valley, Arizona. Two deaths have already occurred from the disease. GEN. GRANT has been received everywhere in Norway with extraordinary enthusiasm, crowds following him about. SIX HUNDRED journeymen shoemakers of Chicago struck, August 6th, for an advance of \$3 per week. SEATTLE shipped more coal in July than during any previous month, the total being 14,001 tons. THIRTY thousand dollars' worth of books were added to the Princeton College library during the last year. IT is said that a new silver and electro-gilt counterfeit in the shape of a quarter eagle is in circulation. A PROTECTIVE association of flour men, to prevent wholesalers from retailing, has been formed in Philadelphia. ASSESSORS' returns from 90 Massachusetts towns show a loss in valuation of nearly \$2,000,000 the past year. A BILL allowing women to vote in school meetings has passed both houses of the New Hampshire Legislature. GOVERNOR IRWIN has offered a reward for the arrest and conviction of the Grand Island murderer or murderers. THE town of Alta, Utah, which was destroyed by fire on the 1st inst., is being rapidly rebuilt in a more substantial manner. THE Hawaiian Legislature has made an appropriation of \$38,000 as a subsidy to the Pacific Mail Steamship Company. FLOODS have so damaged roads and railways, that communication is entirely suspended between Moldavia and Wallachia. ON August 6th, the coal shed of the Copperopolis railroad, Stockton, was burned together with its contents, 100 tons of lone coal. THE Porte has warned the Powers that the Mussulmans in the districts annexed to Montenegro and Servia, will rebel. THE passenger train which left Pittsburg August 7th, collided with a freight train. Several killed and many wounded. THE officers and directors of the Bank of New York have taken the initiatory steps to reduce its capital from \$3,000,000 to \$2,000,000. IN the House of Commons, August 6th, Northcote, moving the supplementary estimates, said the House must provide for a deficit of £4,300,000. AT Boston the car shed of the Eastern Railroad Company was burned on August 5th, with six passenger cars and two Pullman cars. Loss, \$55,000; insured. A PROCLAMATION has been issued in Herzegovina, announcing that all persons who offer resistance to the Austrians will be tried by drumhead court-martial. IT is said that 47,000 Russians are sick in Bulgaria, and constant reinforcements are necessary to keep up an effective army. General Todleben is down with typhus. THE Russians have discovered that of 3,500,000 roubles subscribed to the volunteer fleet fund, more than half of the sum found its way into the pockets of the organizers. IT is expected that the Dayton, Sheridan & Grand Ronde railroad, Oregon, will be completed to Sheridan by September 1st, and to The Dalles by October 1st. THE subject of building a narrow-gauge railroad from Virginia City to Reno is being again agitated. Surveys show that that town can be reached in 30 miles by a practical route. THE new steel dispatch vessel *Iris*, of 4,000 tons and 7,000 horse-power (nominal), that has just been added to the British Navy, has been tried, and proved to have a speed of 21 miles an hour. A COLORED man in Texas, believing when the eclipse came on that the end of the world had arrived, hastened his own and his little son's journey over Jordan by the aid of a hatchet and a razor. THERE are over \$2,500,000,000 in railroad bonds and stocks which pay the owners nothing. There is \$500,000,000 in iron furnaces and manufacturing establishments, and \$600,000,000 in shipping, hopelessly tied up.



The Golden Milestone.

Leafless are the trees; their purple branches
Spread themselves abroad like reefs of coral,
Kissing silent
In the red sea of the winter sunset.

From the hundred chimneys of the village,
Like the Alfreed in the Arabian story,
Smoky columns
Tower aloft into the air of amber.

At the window winks the flickering firelight;
Here and there the lamps of evening glimmer,
Social watchfires
Answering one another through the darkness.

On the hearth lighted logs are glowing,
And like Ariel in the cloven pine tree,
For its freedom
Groans and sighs, the air imprisoned in them.

By the fireside the old man seated,
Seeing ruined cities in ashes,
Asking sadly
Of the past what it can never restore them.

By the fireside there are youthful dreamers,
Building castles fair, with stately stairways,
Asking blindly
Of the future what it cannot give them.

By the fireside tragedies are acted,
In whose scenes appear two actors only—
Wife and husband,
And above them God, the spectator.

By the fireside there is peace and comfort;
Wives and children, with fair, thoughtful faces,
Waiting, watching
For a well-known footstep in the passage.

Each man's chimney is his Golden Milestone;
Is the central point from which he measures
Every distance
Through the gateways of the world around him.

In his farthest wandering still he sees it,
Hears the talking flame, the answering night-wind,
As he heard them
When he sat with those who where, but are not.

Happy he whom neither wealth nor fashion,
Nor the march of an encroaching city,
Drives an exile
From the earth of his ancestral homestead.

We may build more splendid habitations,
Fill our rooms with paintings and with sculptures,
But we cannot
Buy with gold the old associations.

—Longfellow.

News from a Knot-Hole.

Mrs. Jenkins lived in the other part of Rev. Mr. Capers' house, and thought herself fortunate in the enjoyment of so great a privilege. Most good people like to be as near the minister as they can. Mrs. Jenkins did. Her part was merely an "L," built on the main structure. Her little attic, therefore, was neighbor to the minister's study. Just in the corner of the minister's study floor was a knot-hole; a trifling sort of thing in itself, but when once found to open into Mrs. Jenkins' attic, of the widest importance in its consequences.

When Mrs. Jenkins finally became aware of so close a connection with the minister's family, she sat down to fold her hands and congratulate herself. Next, she formed her resolution not to let any good opportunity slip unimproved to inform herself of matters that would otherwise remain dark to her. Day after day, therefore, her ear and that knot-hole renewed their acquaintance with one another. Sometimes she picked up quite a little bunch of news; and sometimes she went off down stairs, as hungry as ever. There was as much variation from day to day as there is in the price of stocks of exchange.

Going up to her little attic one afternoon to hear if anything special was doing in the adjoining apartment, she was delighted beyond expression to catch the sound of a voice. It was Mr. Capers in conversation with his wife. Up she climbed, walked tip-toe across the garret floor, got down on her knees, and put her ear as close to the knot-hole as she could get it. She even shut her eyes, lest some of the good things should escape by that way.

For awhile she did not understand anything clearly. Now she heard Mrs. Capers laugh; then Mr. Capers stopped a minute and laughed, too. This served to excite her the more, and she pressed her head so close against the rough partition that when she came to go away she carried of splinters in plenty in her hair.

Finally she heard something with distinctness. Mr. Capers was telling his wife who appeared to be in great glee, of a man who had been saying hard things to his wife. Said he, in the course of his remarks:

"Mr. Jones got to abusing his family at last. He declared his wife should not go out visiting, and threatened to shut her up if she dared disobey him. As for going to those evening meetings, he declared he meant to put a stop to it; he had had enough of it. It did not do her any sort of good, and made a great deal of trouble and expense to him. He should put an end to it at any and every hazard!"

Mrs. Jenkins started up in blank surprise. "Now I want to know," said she to herself, "if our minister says that of Mr. Jones?"

Without waiting to hear any more, Mrs. Jen-

kins folded her arms tightly and defiantly about her, and started down the stairs. The next thing she did was to throw on her "things," and start off at high speed for her friend's, Mrs. Tautog.

"Now I want to know!" said the latter, as Mrs. Jenkins came through the back entrance, "Do tell if that's you! Sit down, do. What's the word this afternoon? Heard anything very new lately?"

"Oh, well, no—I do no, either; p'raps it may be new to you though."

"Why, what is it?" said she. "I dare say 'tis. I'm not in the way of hearin' anything till everybody else has picked it up all clean. What is it now?"

"Oh, well, nothin' really worth mentionin'. But then you may as well know as me. It's nothin' though, that I care to have go from me; you know I don't wish to be mixed up in this scrape."

"No, your name shan't be mentioned. But what is it, Mrs. Jenkins? What is it? Do pray tell me suddin', for I'm a dyin' to know." "It's no great affair, after all, though. Still, it's something. But this is all there is to it. Mr. Jones has gone to abusin' his wife shamefully; and he declares that if she thinks of goin' out a visitin', he'll surely shut her up where she can't get out so soon."

"Of all the things in the world!"

"Yes, and more'n that; he even gone and forbid her goin' to evenin' meetings. What do you think of such a man as that?"

"I think he is a monster!"

"And so do I. But that ain't quite all. He jaws her all the time, abuses her, threatens her, and keeps her in mortal fear of her life! Only to think of it!"

"How did you hear about it? I wonder if folks generally know it? How did you hear about it, I'd like to know?"

"Well, I'd as lief tell you as not, Mrs. Tautog, but then you must promise not to tell anyone else about it."

"Oh, to be sure not. What should I be gad-din' around the neighborhood for, tellin' hard stories about respectable folks? Who did tell you, though?"

"Nobody told me exactly; but I happen to know it come in the first place from the minister."

"You don't say so!"

Mrs. Jenkins nodded in silence.

"Well, I do declare now! Who'd ever a thought of such a thing of Mr. Jones! But I've seemed to take notice back along that his wife was a good deal downhearted and sort o' melancholy like. And that must be the reason I know. That explains all."

"Yes," said Mrs. Jenkins, "that's it."

The latter did not stay very long after unbosoming herself of her heavy secret, when off posted Mrs. Tautog, armed and equipped for the brave business she had in hand. The first house she dropped into was Mrs. Mallory's.

"Mrs. Mallory," said she, almost as soon as she was seated, "have you heard the news?"

"Why, no," answered the astonished lady. "what is it, pray?"

And forthwith Mrs. Tautog related all that Mrs. Jenkins had been kind enough to tell her, and a good deal more—saying nothing about the embellishments she laid on in the course of her story.

Mrs. Mallory was astonished, of course. And as soon as her visitor had withdrawn, she dons her bonnet and shawl and whips across to Mrs. Dinks. There the story was repeated with variations, and considerable additions. Then Mrs. Dinks took it up. And then Mrs. Murray got interested in it, and then Mrs. Filpot, and so on, till everybody had got hold of it and had talked it up, and had passed judgment upon the man who was guilty of such malpractice to his family. If it had stopped right there, perhaps it would have answered; but it didn't. It spread like a circle in the water, till, in the end, Mrs. Jones herself heard it; and heard, of course, that the author of the story was the minister's own self.

The next thing to be done was for Mr. Jones and his family to leave Mr. Capers' church and go somewhere else. The clergyman was a good deal troubled about it, and his wife went over to see if she could discover the cause. Mrs. Jones received her with a good deal of coldness and seemed hardly civil. Unable to endure it any longer, Mrs. Capers asked the aggrieved lady frankly what the trouble was, and Mrs. Jones as frankly told her; that was well, for now the latter knew exactly what the matter was, and what was necessary to do.

Going home and imparting the intelligence to her husband, he manifested quite as much astonishment as she. He sat and thought it over a little while, in order the better to collect himself before taking a single step, and then started on direct for Mr. Jones himself. He told Mr. Jones what he had heard, and declared the whole of it an untruth from beginning to end. Mr. Jones went on with all the minutest particulars connected with the affair, and making the most of the case in his power against the minister. Still, the latter positively denied his guilt, and declared his determination to ferret out the author of so base a slander, if it was within human possibility. And he hurried back home and set about it.

For some weeks it was a mystery still; he could get no clue to anything. It perplexed him beyond conception. Finally, his wife came running down stairs one day, her face flushed and excited, and said to him in her unsteady breath;

"Mr. Capers, have you noticed that knot-hole in your study floor?"

"Why, no," said he. "Where is it and what of it?"

"Just come up stairs and see."

And up they went together. She pointed to the tell-tale spot, and remarked in a whisper:

"I just caught Mrs. Jenkins with her ear to that very hole."

That was the first step toward the unravelment of the mystery. In a few days more the whole of it began to come out. He had sent his wife round to make a few innocent inquiries, and she had brought back just such intelligence as he expected and required. And, putting this thing and that together, and recalling certain ideas that up to that time had passed out of his mind altogether, he thought the matter was explained at last. So he went over to Mr. Jones once more.

"Come," said he, "if you will consent to go home with me for a short time, I think I can explain some things that have hitherto stood in the way of our friendship."

Mr. Jones did not happen to love malice well enough to refuse, and accordingly took a walk with the minister over to his residence. The latter at once took him into his study and shut the door.

"In the first place," said he, "I suppose you know that Mrs. Jenkins lives in the 'L'."

"Yes."

"Well, and you observe that knot-hole?"

"O, certainly."

"And this is my study."

"Yes."

"And where my wife often takes the liberty to come and sit with me."

Mr. Jones said he understood that.

"Now, then," continued the clergyman, "I am in the habit of frequently reading aloud to her. And once upon a time I happened to be reading from this very book (picking up a volume of fiction from the table), and here is something out of that same book that I am going to read to you." And he went on to read to Mr. Jones several paragraphs, in which occurred the following:

"Mr. Jones got to abusing his family at last. He declared his wife should not go out visiting, and threatened to shut her up if she dared disobey him. As for going to those evening meetings he declared he meant to put a stop to it; he had had enough of it. It did not do her any sort of good, and made a great deal of trouble and expense for him. He should put an end to it at any and all hazards!"

Mr. Jones burst out laughing. "Is that all?" said he, his face as red as the setting sun."

"That and the knot-hole," said Mr. Capers, smiling good-naturedly.

Mr. Jones offered him his hand. From that moment they were friends again. He went back to church the next Sabbath as he should have done. But Mrs. Jenkins has never heard the last of it.

HARSH WORDS.—Charles Sumner never uttered a greater truth than in the following, which is published in Pierce's life of that great man: "This world is full of harshness. It is easier to censure than to praise; the former is a gratification of our self-esteem, while to praise seems, with minds too ambitious and ungenerous, a tacit admission of others' superiority. It is a bane of society wherever I have known it, and here in Boston as well as in London, a perpetual seeking for something which will disparage or make ridiculous our neighbors. Their conduct is canvassed, and mean and selfish motives are attributed to them. Their foibles are dragged into day. I do not boast myself to be free from blame on this account, and yet I try to find what is good and beautiful in all that I see, and to judge my fellow-creatures as I would have them judge me. There is a verse in Pope's 'Universal Prayer,' which is full of beauty. I wish it was graven on tablets in all our churches. You will pardon me for quoting what is so trite:

Teach me to feel another's woe,
To hide the fault I see;
That mercy I to others show,
That mercy show to me."

A RESTLESS TOWN.—Garland is a town on wheels. Whenever the Denver and Rio Grande railroad finishes a section of road, the town moves to the end of the line. The people of Garland are determined to live at the terminus of the narrow gauge, no matter where it takes them. As the line will be extended to Alamosa next week, the festive Garlanders are now preparing to pack up and move, or "dust," as they put it. The houses are being taken down in sections, and in a week or ten days the present site of Garland will be deserted both by friend and foe. Garland was built in a week, and at one time had about 1,000 inhabitants. It is a healthy place; it was located about one year ago, and there have been but seven deaths.

JUMPING A CALF.—The *Amador Ledger* says: Mr. Speakman met with a ridiculous mishap the other day in the vicinity of Sutter creek. Mounted on a fine-looking animal, he was proceeding up the grade toward the Lincoln mine. Observing a calf lying in the middle of the road, he conceived the idea of performing the equestrian feat of jumping over it. While in the act of doing so, the calf rose up suddenly, and horse and rider went sprawling headlong in the dust. No bones were broken, nor bruises sustained worth mentioning, but the horseman is the butt of an infinite number of jokes about jumping the calf.

Something About Farming in California.

Notwithstanding the abuse of the California farmer as a land monopolist, a grabber, a detriment to the public, and the like, there are a great many things which can be said in his favor with more truth than in that of any other cultivator of the soil in this country or in the world. In the first place, the California farmer is the most progressive and enterprising representative of his class to be found. He is the most open to new ideas, the quickest to appreciate new discoveries. Witness the rapidity with which every improvement in agricultural machinery here makes its way into general use. It has taken nearly a generation to introduce even the mowing machine in New England. In the last decade every year has witnessed some new step in California towards economy and certainty of production. This is probably due to the more abundant rewards of agriculture here, and the opportunity which they afford for experiment and speculation. But whatever its cause, it is a good thing. It is having its influence on the character of the men who own farms. They are not, as in some other places, the dullest part of the population—men who inherited a hundred acres from their fathers and continued in the business from sheer lack of enterprise to get out of it, or sons who were not smart enough to learn a trade or profession. Among the farmers of Solano county we count many highly educated men—physicians, ministers, teachers, lawyers, merchants, who have forsaken their former avocations to engage in something more remunerative and just as capable of employing all their intelligence and talent. Nowhere in California do we see a general dislike of the business among farmers' sons. The brightest boys are not almost to an individual determined to go into trades or professions, as is the case in Eastern States, but prefer sticking to the farm to doing anything else. They are anxious to have a good education and nearly always have it where the fathers are well to do, but it does not make them impatient of plodding in the soil, for they see in that as good a chance of thrift as anywhere.

On the whole our observation of California farmers convinces us that they know a good deal more about their own business than those who generally criticize them. Even the evidences of shiftlessness and waste, or what are taken for such, are frequently only a perception of the truest economy in farming and a recognition of the different conditions of the business here and in the East.—*Diron Tribune*.

HOW TO BE A MAN.—When Carlyle was asked by a young person to point out what course of reading he thought best to make him a man, replied, in his characteristic manner. The letter is too long, we quote only the concluding paragraph: "In conclusion, I will remind you that it is not books alone, or by books chiefly, does a man become in all points a man. Study to do faithfully whatever thing in your actual situation, then and now, you find either expressly or tacitly laid down to your charge—that is your post, and stand in it like a true soldier. Silently devour the many chagrins of it, as all situations have many, and see you aim not to quit it without doing all that it, at least, required of you. A man perfects himself by work much more than by reading. There are a growing kind of men that can wisely combine the two things; wisely, valiantly, can do what is laid to their hand in the present sphere, and prepare themselves withal for doing other wider things, if such lie before them."

THE MUSIC SHE PLAYS.—A St. Louis journal advises young men to choose a wife by the music she plays, and the way she plays it. If she manifests a predilection for Strauss, she is frivolous; for Beethoven, she is impractical; for Liszt, she is too ambitious; for Verdi, she is sentimental; for Offenbach, she is giddy; for Gounod, she is lackadaisical; for Gottschalk, she is superficial; for Mozart, she is prudish; for Flotow, she is commonplace; for Wagner, she is idiotic. The girl who hammers away at "The Maiden's Prayer," "The Anvil Chorus," and "Silvery Waves," may be depended upon as a good cook, and also as being healthful; and if she includes "The Battle of Prague" and "The White Cockade" in her repertoire, you ought to know that she has been thoughtfully, religiously and strictly nurtured. But, last of all, pin your faith upon the calico dress of the girl who can play "Home, Sweet Home."

OLD REVOLUTIONARY IRON.—The anvil used at Valley Forge, 1778, in shooing the horses of the Continental army, has been found in the old mill, Phoenix Iron Works. The anvil was resurrected from a pile of cleanings from cavalry stables, by one Snyder, in whose possession it remained till about 1830, when it was presented to J. Roger's gun works, at the Forge, as an United States relic. Was afterwards bought at public sale, by Eph. Vanderslice, and finally sold by him to the Phoenix Iron Works, with old iron, and used by Alexander Russell, in their smithy, several years. From thence it found its way to the mill. A committee was appointed to reverently gather up the old relic, and return it to its old home, at the forge for the Centennial.

AT THE BERLIN BANQUET.—Little Powers (at the door, ruefully): "But are we to get nothing?" Big Powers (at the table, while the Turkey is being carved): "Be quiet, my little dears; you shall come down to your desserts."—*Punch*.

The Famine in China.

The official news received by the London *Spectator* from Shanghai, and dated the end of April, records the details of a famine such as even our horrible famines in India have never yet approached in horror. It is something to know that rain has fallen since this information was sent off, and that in four or five months' time, if anything can be done to abate the horrors in the interval, the agony of the suffering may be over. But the rain itself can produce no result till the crops which it renders possible are reaped, and, in the meantime, all the frightful incidents which we hear of in these coldly accurate Chinese blue books must go on, except so far as they are prevented by Chinese or foreigners' exertions.

What these incidents are it would be almost needlessly startling to explain, were it not for the fact that, if we are rightly informed, every £1 which this country can send, may prevent a murder of the most hideous kind—a murder of relatives by relatives, to be followed by protracted cannibalism. Every £1 received from England, say the missionaries on the spot, may save a life. But to save a life is nothing in comparison with saving a parent from killing his children, or a child from killing his parents, for the same purposes for which they would kill sheep or oxen, namely, in order to use them as meat. The mere suggestion is one which revolts the very body almost as much as it revolts the soul. Yet the dry official reports say: "In the earlier period of distress, the living fed upon the bodies of the dead; next, the strong devoured the weak, and now the general destitution has arrived at such a climax that men devour those of their own flesh and blood. History contains no record of so terrible and distressing a state of things, and if prompt measures of relief be not instituted, the whole region must become depopulated." The Chinese authorities themselves assert that 5,000,000 of people had died, either of the famine or of the violence of those who wanted to avoid starvation for themselves. The Roman Catholic bishop of Shansi, Mgr. Monagatta, completely confirms this frightful intelligence.

THE MICROPHONE AND INSECT VOICES.—A writer in the *Entomologist's Monthly Magazine* suggests that, as the microscope reveals to the eye of man all the most insignificant of nature's works, why may not the microphone disclose to our hearing the most inaudible sound. Through Prof. Hughes's discovery, we may hope, he says, to have great light thrown upon the somewhat obscure subject of stridulation in insects. We do not see why the microphone may not be applied to detecting the high-pitched sounds produced by the grasshoppers and crickets, and the now inaudible stridulating noises made by moths and other insects. It could, possibly, be applied to studying and detecting the noises produced by fishes and marine invertebrate animals. It could also be applied, perhaps, to detecting the gnawing of museum pests in collections of stuffed mammals and birds and entomological collections. Particularly valuable would its use be in detecting the presence of white ants in the tropics, in the inside of articles of house furniture, which this insect ruins before its work is usually detected.

ANATOMY OF A PIANO-FORTE.—A writer has taken the trouble to give the actual material used in constructing a piano-forte. In every instrument there are 15 kinds of wood, viz., pine, maple, spruce, cherry, walnut, whitewood, apple, basswood and birch, all of which are indigenous; and mahogany, ebony, holly, cedar, beech and rosewood, from Honduras, Ceylon, England, South America and Germany. In this combination, elasticity, strength, pliability, toughness, resonance, lightness, durability and beauty are individual qualities, and the general result is voice. There are also used of the metals, iron, steel, brass, white metal, gun metal and lead. There are in the same instrument of seven and one-half octaves, when completed, 214 strings, making a total length of 787 feet of steel wire, and 500 feet of white, covering wire. Such a piano will weigh from 900 to 1,000 pounds, and will last, with constant use, not abuse, 15 or 20 years.

A VOLCANO IN THE MOON.—Dr. Hermann J. Klein, of Köln, with his five and a half inch dialyte, by Ploesel, discovered, some time ago, on the moon's surface, a great black crater on the Mare Vaporum, and a little to the northwest of the well-known crater Hyginus. He describes the crater as being nearly as large as Hyginus, or about three miles in diameter, being deep and full of shadow, and as forming a conspicuous object on the dark gray Mare Vaporum. So far, the English observations of the new crater have been perfectly in accord with those of Dr. Klein, and if the existence of this new crater be confirmed, it will form the strongest possible evidence of a real change on the surface of the moon; a change, moreover, of a volcanic nature.

SIZE OF THE TIGER.—The size which the Bengal tiger reaches, is a matter of some discussion; but, in *Nature*, J. Fayer mentions cases in which a tiger has reached the size of eleven feet nine inches, or even twelve feet, measured from the nose to the tip of the tail, before skinning. Still a tiger is large that reaches ten feet.

"THERE! that explains where my clothes-lines went to!" exclaimed an Iowa woman as she found her husband hanging in the stable.

Young Folks' Column.

How the Country Children Saw the Caravan.

"Fun ahead, boys! fun alive!" shouted farmer Swift to a group of lads who were playing "four old cat," as he drove into his own door-yard, late one hot September afternoon, 50 years ago.

The boys dropped bat and ball, and gathered about the cheery, good-natured man, as he dismounted from his chaise and went on with his animated talk.

"George, you jump on to the bay colt, and ride up to Frizzle Hill and on to Saunder's mountain. Horace, you take the white filly and cut down to Tiffany's Ferry and Prindle's cross-roads, and both of you stop at every house on the way, and tell all the boys and girls that the big New York caravan, on its way from Brattleboro to Greenfield, will come along here some time in the night, and that I will stop the whole thing, so that all who shall get here before sunrise to-morrow morning can see the elephant and camels, sure, and perhaps get a sight of the other animals.

"Joseph, you may tackle the brindle steers into the ox wagon, and go down to Moose plain and bring up a good big load of those ripe sugar pumpkins. Jane, you and Esther run out into the garden, and pick and husk a basket of sweet corn and bring it here to the door-yard fence. Wife, now I've got this business off my mind for the present, I guess I'll have a bit of supper."

These various instructions were all obeyed with alacrity and carried out to the letter, and at the usual early hour for retiring, quiet settled down over the old farm-house.

"I shan't go to bed," said the farmer, "for fear of sleeping so sound that the caravan will steal a march on me after all. Come, Major." And the stout, healthy, pleasant-faced man, and the large, brown house-dog stretched themselves out upon a buffalo robe on the floor of the broad, open stoop, both prepared to sleep with one eye open.

Between three and four o'clock of that clear, dewy September morning, there came a steady tramp and a smothered rumble from far up the dusty road. Major pricked up his ears and gave a quick, sharp bark at the unusual sound. Farmer Swift sprang to his feet, and, going to the chamber door, called out, "Fun ahead! fun alive! Up, up all of you!"

Farmer Swift bent his tall, sinewy form down behind the high board fence, and as the huge, long black column came hurrying down the hard, white road, a big yellow pumpkin rolled noiselessly down the green slope, directly under the feet of the monster elephant. The lusty, hungry fellow was not slow to recognize it as a precious morsel. He had a special fondness for sweet pumpkins. Farmer Swift had heard one of Ajax's keepers say so the day before. It was a long time since he had had pumpkins for breakfast, and he now caught up this one that lay so opportunely in his path, by a deft twist of his trunk, when, in a twinkling, thump went the bright golden sphere down upon the trodden track, and lay in crisp, inviting fragments at his majesty's feet. Giving long, low gurgling notes of joy, always so touching when elephants utter it when they are pleased, he wheeled about and fell to eating with a keen relish.

Of course Ajax immediately became an impassable obstacle in the way of the long line of animals on foot and in the heavy, gaudily-painted, wheeled cages that were behind him. The weary, hungry creatures that were nearest Ajax, and on foot, hearing him munching his food, set up each his peculiar cry of hunger, and soon from the whole line of cages, whose wooden slides were always kept open when the caravan was moving in the night, that the poor, imprisoned animals might have fresh air, came forth such a din as was never before heard in that quiet jog-trotting neighborhood.

The keepers and drivers shouted, scolded and prodded, and then coaxed the elephant to go on, but to no avail. Just before one pumpkin would be finished by the hungry old Greek, another would come stealthily down the grassy slope and up plump to his feet. It was some time before the astonished and now thoroughly enraged keeper discovered the source from whence came this seemingly inexhaustible supply of golden tid-bits for an elephant, so toothsome to this one, the lord of their caravan.

Soon the pale gleams of the morning disclosed to them the broad, rich fields and the big barns, and they wondered where the latter filled with pumpkins. They straightway implored Farmer Swift to feed the elephant no more. To this request he acceded with a sly twinkle in his eye, for now ran up from the roadside bushes, from corners of the fences, and came down from the tree-tops and out of the sheds and barns, troops of hurrahing boys and girls, each with a cream-white, succulent ear of sweet corn, and showered them in a heap before the delighted Ajax.

At this junction the old fellow himself seemed to enter into the spirit of the fun, and at intervals, while crunching the tender ears of corn and uttering his soft notes of delight, he went through, what he could in his harness, with his manual of feats and tricks, as if to reward his young friends for his unexpected though very acceptable collation.

The caravan men were quite angry, but they could not help themselves until the heap of

corn had been eaten, and the boys and girls, young men and maidens, and not a few fathers and mothers, had inspected the large line of caged wonders, down to the monkeys, the birds of paradise and the anacondas.

Farmer Swift had mollified the men before the caravan had resumed its way, for he had quietly ordered his hired men to milk the cows, and his eldest son to gather a bushel-basketful of "early harvests," and as the rich, hearty beverage and the large, spicy, mellow apples were passed around to the not long ago irate keepers and teamsters, they acknowledged both the corn and the pumpkins, and lighting their pipes, good humoredly went their way, and the rattling, rumbling caravan, headed by old Ajax, soon disappeared.—Mrs. Preston in the *Cultivator*.

GOOD HEALTH.

What Banting Believed.

Now that newspapers, which indulge in the profit to be derived from quack advertising, are filling their columns with notices of nostrums for reducing corpulence, it may be well to call to light again the legitimate work which has been done to effect the desired leanness. Some time ago, William Banting, an Englishman, wrote a pamphlet on this subject, which is of a very practical nature, being chiefly confined to experiments on himself to reduce obesity. By dieting, he reduced his weight in a year from 202 pounds to 156, without any inconvenience whatever. He ate all kinds of meat, except pork and veal, all kinds of fish, except salmon, eels and herrings, and abstained from potatoes, parsnips, beetroots, turnips and carrots. Fruit was freely indulged in, and toasted bread. Green vegetables were not prohibited, neither soft-boiled eggs; cheese was sparingly used. He states confidently that quantity of diet may be safely left to the natural appetite, and that it is the quality only, which is essential to abate and cure corpulence. He tried rowing, gallons of physic and liquor potasse, horseback riding, sea air and bathing, change of climate, but experienced no relief until he changed his diet.

In his pamphlet, he gives a tabular statement of the average of stature and weight of 2,648 healthy men, obtained from statistics prepared for the use of an insurance company. A condensed form of this may suggest to our readers about how much each one of them should weigh.

Stature.	Weight.
5 feet 1 should be.....	120 pounds
5 feet 5 should be.....	142 pounds
5 feet 8 should be.....	155 pounds
5 feet 10 should be.....	169 pounds
6 feet should be.....	178 pounds

Those who are desirous of increasing their weight will find abundant hints for doing so in what is above written. Some are by nature and constitution lean, and no amount of dieting could produce corpulence in them; but there are none who tend to obesity, that cannot, by a proper regimen, bring their weight within manageable limits. It is not advisable to make sudden changes in one's diet, or such changes as impair the general health. Experiments, carefully conducted, will soon satisfy the accurate observer what for him is the wise course. Mr. Banting advises that the experimenter in diet should have himself weighed every fortnight or month, regularly, that he may be encouraged by the steady loss in weight to persevere in his dieting, until he has obtained the goal of his desires.

THE HEALTH OF SAN FRANCISCO.—Valuable statistics relative to disease and mortality are given in Dr. Meares' report, showing the operations of the Health Office during the fiscal year. On a basis of 300,000 population, the death-rate was 18.35 per thousand. Last year the rate was 20.56 on the same basis of population, against 17.6 the previous year, on a basis of 272,345 population. The death-rate per thousand of the other populous cities the same year was as follows: London, 21.79; Liverpool, 26.56; Dublin, 27.94; Glasgow, 24.70; Edinburgh, 32; Naples, 31.73; Munich, 33.90; Calcutta, 32.46; Vienna, 33.06; Havana, 40.86; New York, 24.32; Brooklyn, 21.52; Boston, 20.63; Providence, R. I., 18.81; New Haven, Conn., 19.70; Philadelphia, 18.80; Baltimore, 22.04; Washington, D. C., 25.42; Richmond, 21.27; New Orleans, 22.97; Cleveland, 17.91; and Chicago, 17.83. The rate was reduced over the preceding year at San Francisco, New York, Brooklyn, Boston, New Haven, Philadelphia, Washington, Richmond, Cleveland and Chicago. The rate was increased at Providence, Baltimore and New Orleans.

CRAMPS FROM ALKALI WATER.—A correspondent of the *Fresno Republican* says: Two men in the employ of Dunn & Donnelly, while driving sheep across the plains, were taken with cramps, and came very near going to their last resting place. Cause, drinking too freely of the creek water, which is warm and strongly impregnated with alkali and other substances equally injurious to the system, and which nearly always makes one sick. Sheep herders drink it, however, without any apparent ill effect.

DOMESTIC ECONOMY.

Cream Instead of Butter.

Several of our lady contributors have noted the advantages of using cream instead of butter in cake making etc. A housewife, writing for the *New York Tribune*, goes well nigh the extreme by reading the churn altogether out of existence on the farm. She writes: It would be well to train a family from the outset to regard butter as an incidental or luxury, rather than a necessity. The manufacture of it is one of the hardest and most time-consuming tasks that a farmer has to perform. Moreover, with all the work it involves, butter adds less to the health and sustenance of the family, than would the eating of the cream that goes into the making of it. Where one physician advises the eating of butter, a thousand recommend the consumption of cream. I think no one will dispute the statement that of cream and butter eaters, the former enjoy the best digestion, the best health, and have the finest complexion. Then why work one's self to death for worse than naught? Why not eat milk and cream instead of turning it into butter? Good bread is good enough without the addition of a condiment to make it palatable; but if eaten with sweet cream, what is more delicious?

But all this falls as dew on a cabbage leaf on the senses of the American youth, who not only plasters his bread with a layer of butter, but adds to that another of honey or molasses, with a top dressing of apple-sauce. But to the housewives that are casting about for new ways of economizing, some way in which their burdens may be lightened without entailing any sacrifice of the health and comfort of their families, this doctrine of cream eating may carry some weight. It would seem that the healthfulness, tidiness and refinement that cream eating has over that of butter, would recommend it especially to the more intelligent class of farmerines and farmers, and I venture to affirm that after a month's trial in such families of the cream method, a pitcher of cream on the table for fruit, for bread, for oatmeal and cracked wheat, and rice and vegetables, instead of the portion of butter which, in this hot weather, soon changes into a slimy-looking batch of grease, that a decided preference would be found for the cream.

APPLE BUTTER.—Fruit butter may be made in the country very easily and cheaply. When apples are ripe make, say three barrels of cider. Then pare and core four bushels of apples. Then boil down the three barrels of cider to one and a half, and set it convenient to the copper kettle, in which place the four bushels of apples. Pour on the apples from the cider enough to answer the purposes and fire up. As the cider boils away add more and more until it is all used up, and the contents of the kettle are brought down to proper consistency, of which one must be judge. A little practice will make one perfect in this process. This is for apples. It will apply equally well to any other kind of fruit from which it is practicable to obtain the juice as one would from apples.

TO MAKE VINEGAR.—Good vinegar can be made with sugar, water and yeast, but cider vinegar is better. For the former, boil coarse sugar with water in the proportion of a pound for each gallon, and skim the mixture. When lukewarm add yeast; a pint for every three gallons of water. It is best to spread the yeast on toasted bread. Let it work for 24 hours, then turn into a cask or jug and expose to the heat of the summer sun, or place it near the fire. Fasten a piece of netting over the bung hole to keep out flies and insects. At the end of three weeks or a month it will be very good vinegar if the heat has been great enough; if not it will require longer. It will of course improve with age.

JAM TURNS.—Roll out some short paste about one-eighth of an inch thick, cut it in pieces about four inches in length, and between two and three inches in breadth; lay on each a little apple jam, or any other preserved fruit, without syrup; turn the edges over, wetting them, as little as possible, with water; press them lightly together, and also the ends; lay them on tins, and bake in a moderately hot oven. Ice them very perfectly, and return them to the oven for a few minutes, or set them in a Dutch or American oven before the fire.

APPLE BREAD.—A very light, pleasant bread is made in France by a mixture of apples and flour, in the proportion of one of the former to two of the latter. The usual quantity of yeast is employed as in making common bread, and is beaten with flour and warm pulp of the apples after they have boiled, and the dough is then considered as set; it is then put in a proper vessel, and allowed to rise for eight to twelve hours, and then baked in long loaves. Very little water is needed.

RICE BALLS.—Take the waste pieces of steak or baked meat, chop fine, and season with salt, pepper, cloves, cinnamon. Wash rice and mix with it, then tie up with cloths in the shape of balls and boil half an hour and serve with drawn butter.

DROP CAKES.—Put six well-beaten eggs into a pint of thick cream; add a little salt, and make it into a chick batter with flour. Bake it in rings or in small cups 15 or 20 minutes. The same may be made with graham flour.



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SAN FRANCISCO:

Saturday, August 17, 1878.

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The Week.

The weeks are groups of peerless days. Around the Bay the weather is summer's perfection, and the expressions of admiration which greet each coming morning are sincere and heartfelt. In some parts of the State the mercury is now doing its loftiest climbing, but the clear, dry air and the welcome coolness at nightfall make the heat a light burden.

Grain is pressing toward the seaboard and is filling the interior warehouses. It comes to the water front at Oakland by a score of extra trains a day, and fills the side-tracks, lingering for its turn to run out upon long wharf to meet the waiting vessels. The interior water ways are plowed by countless steamers and barges all with the same intent, to bring the grain to bear upon the market points. While this is going on there is the incentive of firm prices and promising trade. Barley has the inside course this year, little as it was expected, and buyers are seeking out the grain, not awaiting its coming to them. Happy will he be this year who has plump, bright barley, for the demand promises to exceed the supply.

The Personal Equation in Agriculture.

Years ago, when our thoughts were more celestial than they are at present, when our investigation was turned toward the empyrean rather than the earth crust, and when the movements of the stars were more considered than the movements of produce, we fell in with what is called in astronomy, the "personal equation." It has been found that in observation of phenomena, some observers will anticipate its coming and others will fail to record it at the proper moment. It has also been discovered that, owing to some occult trait in the observer, he is likely always to err in the same way. Therefore, where there is a uniform difference in series of records prepared by different observers of the same astronomical event, it is the custom to introduce a personal equation and to regulate the final result of the observations in accordance with it.

When science, like astronomy, has discovered in its most exact and scrupulous votaries an element of personality which warps their faculties so that they habitually depart from the line of mathematical truth, it is little wonder that in the less exact operations of industrial practice there should be personal characteristics disclosed which lead the individuals possessing them toward or away from the path of successful practice. Thus, indeed, we find it in all the occupations of men. No matter if aims and opportunities be identical, there enters into the use of them a personal equation which governs degrees of success, or may be charged with the burden of failure.

Nowhere do the results of the introduction of the personal equation more clearly appear than in agriculture. The man who gives his own active co-operation to the affairs of his ranch is the one who wins the profits, and he who relies upon others to execute his instructions while he is indulging in a little stock gambling or even some other less hazardous pursuit, is quite likely to lose his crop if he does not lose his land. Agricultural enterprises have often fallen into bad repute in this State because they were conducted too much on the "arm's length" idea. There is now an impression, more and more gaining ground, that the conduct of a good farm is business enough for any man, and if the farm be regarded as an avenue for the investment of savings in works of improvement, the investment is safer and more productive than 99 out of 100 outside speculations. Of course the great mass of our farmers, we hope, have always held this idea and acted upon it, and we are glad that the little mass is coming to the same opinion. When the opportunity for direct personal enlistment in all the details of the farm is once seen by a man, the smallest operations become invested with a new significance; and he will find almost every item of his production yielding increased reward, because of higher weights or qualities in the articles he sends to the market.

These thoughts are not altogether in the abstract. One of the readers of the RURAL PRESS, whom we pressed for a contribution on a certain subject, writes a private note to the editor in reply, which, without design on his part, lets us squarely into his method of farming, and turns an excuse for a contribution into a subject for an editorial. The man whose letter we have before us is, in his method, only an individual of a large class of our smaller farmers who are on the high-road to a competence in situations where less diligent and less wise men would but eke out a scanty existence. The more men he represents in his method the better. This State would hold a million of them. He writes:

"Thanks for the honor you do me in your request. Being one of those small farmers that practice a diversified husbandry, I hardly know what month in the year to consider my slack time. This year, October will be an exceptionally busy time. It is my chosen month for marketing the produce of my small dairy, and as I consider the appearance of the article usually settles the price, I almost always mold it up myself. I was rewarded last year for my personal care by the net receipts of some \$650, the produce of six cows and three heifers. Then I expect to put up a fine little lot of beasts, two dozen or so, to fatten for Christmas, at end of September or beginning of October, as I find necessary. Here, again, personal care is much needed in changing from dry grass to such food as squash or mangels. Pigs, to the number of 98, at present require a daily provision, and October will probably find some for sale. Fruit also requires attention. Besides my ordinary autumn work of clearing up land, hauling

manure, etc., I have this year a barn to build, and wing dams in the river to strengthen."

What more need we say? Here is a personal equation in farming which any one can study and reduce for himself. The results gained by such an application to business will be so diverse from those of the opposite method that an astronomer would require an equation as long as his telescope to express them. Nor is the enlistment of personal effort alone productive in small farming. Said a leading San Joaquin farmer to us the other day: "I might just as well have made \$10,000 more this year if I could have helped put in the crop instead of being tied down in the city on other business." It is true. The farm is a large enough business for any man, if he looks at it aright, no matter if it be small at first. Said a man, in answering an objection to the size of his son for a certain place: "He may be small now, but he will grow." Thus it will be with a farming interest. If the size of it be the only objection to throwing the whole soul and effort into it, you may be assured that it will grow. If it does not grow in extent it will "fat up" wonderfully, and this growth will generally be just in proportion as you throw yourself into it.

QUERIES AND REPLIES.

Apple Tree Scale Insect.

EDITORS PRESS:—I send you herewith a twig cut from a Smith's cider apple tree. I presume the insects apparent thereon are scale-bugs. Can you or any RURAL reader advise what is the best course of treatment to free the tree from its invaders? I intend cutting off all the worst infested twigs, and thought of applying very dilute carbolic acid. Would the latter treatment injure the tree?—EDWIN BERWICK, Monterey.

Yes, the insects are "scale-bugs," and we never saw more of them to the square inch. Some of their habitations, like the cities of antiquity, have been raised upon the ruins of earlier ones. The insect seems somewhat different from those with which we are acquainted, and we have sent the specimen to Prof. Riley, U. S. entomologist, with request that he tell us the species. The determination of the species, however, though a matter of interest, does not concern measures for their reduction. The remedy which has been most frequently prescribed for the whole family of scale insects has been a strong alkaline wash. This kills the insects which may be unprotected, and if it be accompanied by a brisk brushing with a stiff brush also destroys those housed in the scales. But this is a process requiring much labor. Dilute carbolic acid would probably have the same effect. We have never used it, and do not know its effect upon the tree. It might be tried, very dilute and with caution. Perhaps it might be added to the soap solution with advantage.

There is one remedy which is summary in its effect both upon the moving insects and those under the scale. It is petroleum. It has been used as an insecticide upon plants sometimes with disastrous results, although a showering with water strongly impregnated with kerosene, has been used with beneficial effect upon moving insects. We have been not a little interested in experiments with kerosene on scale insects, carried on for some time in this city by Mr. G. P. Rixford. We notice that Mr. Rixford, in a communication to the *Southern California Horticulturist*, reports complete success in the application of the fluid in full strength to orange trees, out of the growing season, but that lemon trees do not take to the treatment quite as well. He drenched the leaves and twigs of the orange trees, and covered the trunk with a paint brush, killing the scale insects, forthwith, in and out of their homes. It has always been plain that the insects could not withstand the kerosene, and that the trees do not object is a happy fact. The application should, however, be more generally tried before it be considered perfectly harmless to the orange, and on all other trees should be used experimentally at first.

There is one thing which should always be remembered in applying washes which do not penetrate the scale, and that is that the treatment should begin very early in the season, as soon as the first egg hatches, and continue at intervals. On the twig which Mr. Berwick sends, there are insects just emerging from the scales, others which are house-hunting, and

others which have "sporting their oak" for reproduction, all this season's growth. As the insects are continually hatching out, there must be frequent dosing.

Growing Field Peas.

EDITORS PRESS:—Please inform me if the Canada, or any other field pea is cultivated in this State? If so, are they a profitable crop? How are they harvested, where can they be had, and at what price?—P. C. SWITZER, Los Angeles, Cal.

The great pea-producing region of this State is Humboldt county. This county, lying about 200 miles north of San Francisco, has abundant moisture for the crop and also a heavy rich soil, which seems very favorable for their growth. Large quantities of peas are shipped from this county; the amount for the year ending July 1st, 1877, being 413,420 pounds; for the year ending July 1st, 1876, the amount was 634,060 pounds. The demand for field peas is somewhat limited, and, as at present, they are sometimes dull and slow of sale. The present price in this market is \$1.10 per cental.

There is but little reason to increase the production of field peas if one expects to market them. They may, however, be grown as feed for hogs, and thus marketed as pork. This is the way the chief part of the Humboldt county peas are utilized. Peas are there grown in inaccessible places, whence it would be impracticable to haul them to market, but the hogs fattened thereon are easily driven over the trails and delivered in the market towns. It might also be profitable to turn peas to account as feed for sheep and dairy cows, if one has a mill to turn them into pea meal.

Whether there are any special means employed for harvesting and threshing, we are not informed. The hog process does away with either operation. The only way we know of for gathering, is mowing with a scythe and pounding out with flails. If there be better ways, we should like to hear of them.

Hungarian Prunes.

EDITORS PRESS:—You will confer a favor by giving me the name of the prunes in the accompanying box.—J. R. OLSEN, Courtland, Sacramento county, Cal.

The box contained fine specimens of a fruit which is now very common in this market, and goes under the name of Hungarian prune. It formerly was called "Red Magnum Bonum," but in characteristics does not answer well to Downing's description of "Smith's Orleans," which has "Red Magnum Bonum" for a synonym; nor does it accord with his description of "Red Magnum Bonum" of foreign origin, which is also called *prune d'Eufr*. We do not know what the correct nomenclature is. Perhaps some reader will tell us. It is widely known, however, as the Hungarian prune.

Nicaragua Coffee Seed.

EDITORS PRESS:—I have about a pint of Nicaragua coffee seed. Will you please announce through the RURAL that I will distribute gratuitously, as far as it will go, six kernels to each applicant sending address and stamp to pay the postage on the seed?—I. C. WOODS, Mission San Jose, Cal.

SANDWICH ISLAND SUGAR CANE.—As we have made a treaty with the islands, and as some surplus California capital is being enlisted in Sandwich sugar plantations, it may be well to adopt some of the native achievements, and employ some of our wind in tooting the Hawaiian horn. We read in the *Hawaiian Gazette* that the house of W. G. Irvin & Co., in Honolulu, have on exhibition a bunch of sugar cane, some of the stems of which are 25 feet in length. This cane was grown on the plantation of Messrs. P. Milton & Co., at Olowalu, Maui. The *Gazette* is informed that there is about 40 acres of cane as tall as the specimens described; and it is too tall to stand erect, but is well filled with saccharine matter, and will yield about seven tons to the acre. At this rate a single acre of cane will produce about 15,400 pounds, which at eight and a half cents per pound will realize upwards of \$1,300. This is what the *Gazette* calls "doing a big thing, and shows what can be done by good management and attention to business." With this rate of production, sugar will become so cheap that our little Eastern relatives need no longer devote their Saturday afternoons to scraping sugar hogsheads behind the groceries; they can have their pockets full of "fine crushed."

ON FILE.—"Results of Irrigation in Tulare," J. W. A. W.; "Carpeuteria," O. N. C.; "Bernuda Grass," G. R.; "Apricots," J. S.; "California Sumac," J. A.; "Floriculture," W. C. L. D.; "Pruning," M. P. O.; "In Memoriam," Stockton and Woodbridge Granges.

Rusty Ideas About Wheat.

EDITORS PRESS:—I cut a slip from an Eastern paper and forward it to you. As the ideas advanced are entirely different from those advanced by you a short time since, I should like to see your comments on it. My low land was badly rusted in streaks; where it was the thinnest and rankest growth it was the worst. The land is new, and was summer-fallowed and twice plowed, and sowed to club wheat last October. I cannot see where the theory of "mal-nutrition" comes in here. Threshing is going on lively. Wheat is turning out 12 to 18 bushels per acre right through. Volunteer is the best grain, and yields as heavy as summer-fallow. —SUBSCRIBER, Willows, Cal.

Our querist sends a long article from an Eastern paper on the subject of rust, which contains many true observations, but before the writer concludes he gets beyond his depth and of course flounders about considerably. The sentence to which our attention is particularly asked, is this: "In conclusion, remember that rust is only a form of indigestion resulting from the mal-nutrition of the plant, and that when you cannot bring that food within the reach of the wheat plant by a summer-fallow, it must be done by manures or fertilizers."

This is pure conjecture, where it is not nonsense. There is no truth in the use of the simile suggested by the word "indigestion," and as for rust being a "form of indigestion," you might as well say that a flea is a form of inflammation. Rust is a parasitic plant. To say that rust results from mal-nutrition of the plant is a pure assertion.

No such thing has ever been demonstrated. In fact, every observer knows that in many cases the rust falls like a scourge upon grain which shows all the marks of being well fed. If the "indigestion" theory is to be supported, it would be better to claim that the parasite attacks overfed instead of starved grain. But even this cannot be supported, for though it thus appears in some cases, it does not in others, as our correspondent has found it in his own experience. The fact is that no one knows just what conditions are required for the spread of rust, but the preponderance of belief is that the parasite finds its opportunity in favoring atmospheric conditions,

as we have previously stated. It is probable that there are varieties of wheat which will be found much less subject to the attacks of rust than others, just as some men escape malaria, although it may be for different reasons. But this is not fully established yet, although there have been experiences in this State this year which point in that direction.

The trouble with the writer is that he does not know what he is writing about. That he is rusty on scientific points, may be seen from the fact that in the paragraph next to the one we have quoted he prescribes stable manure or superphosphates for his "mal-nutrition" in wheat, and then says that "superphosphates are scarcely better than wood or coal ashes." The fact is that coal ashes are practically devoid of fertilizing substances.

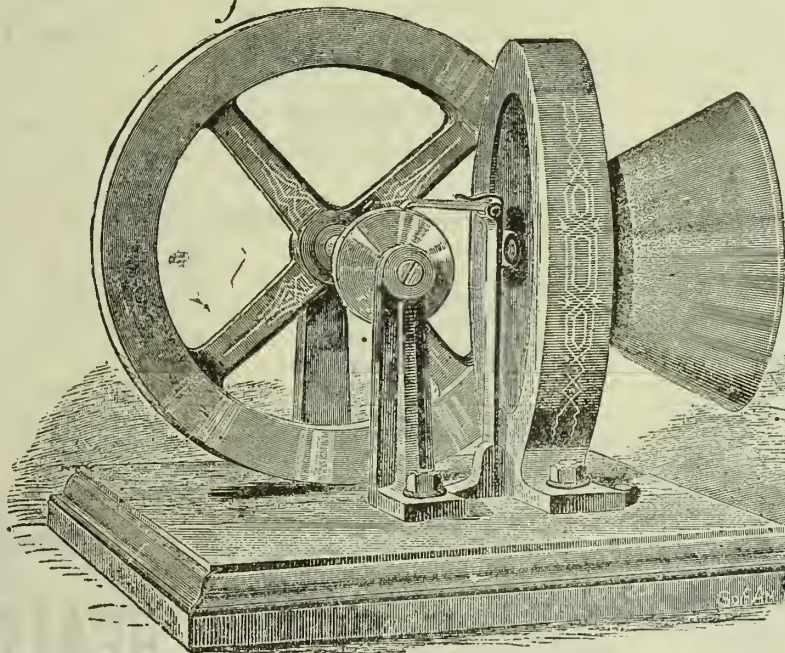
We allude to this subject chiefly to show that if an agricultural writer has an idea that he must explain everything by some hook or crook of his imagination, he had better choose some other line of business. This style of writing is what brought the old "book-farming" into proper disrepute. When a writer reaches the limit of experimental knowledge on a subject, he had better stop, or else state plainly that what he adds is merely his opinion.

THE FAIR season opens with the doors of the great Mechanics' Pavilion in this city. On Tuesday evening the eye of the populace fell upon material which invites the thought that an unrivaled exhibition of the coast's industries is at hand. Now is the time to enjoy the city's cool air and splendid fair, all ye who have money and leisure for vacation.

Edison's Phonomotor.

The latest of Edison's startling inventions is the phonomotor. It is a machine in which the vibrations produced by the human voice are applied so as to produce visible motion. The vibrations are allowed to first produce corresponding vibrations in a regular phonograph diaphragm (as shown in the figure). By means of a piece of rubber tubing placed against the diaphragm, the vibrations are then transmitted to a spring, which in turn vibrates in unison with the diaphragm, and thus with the voice. To the spring is attached a pawl. If any of the uninitiated do not know what a pawl is, they may be referred to the capstans of steamers. Those little hinged irons that, when the capstan has been turned a few inches, fall down with a click, and prevent the capstan from turning back again, will give one a very good idea of what a pawl is. The pawl on the phonomotor spring rests on the edge of a notched wheel. When the vibration of the voice vibrates the diaphragm, which in turn pushes the spring out, the pawl catches in a notch of the wheel, and pushes the wheel around a distance corresponding to the distance the spring vibrates. When, in its vibration, the diaphragm goes back, the spring goes back also, and with it the pawl. The pawl, in returning, catches on one of the other notches, and when the diaphragm comes forward again, the spring is ready to push the wheel around still further. So the phonomotor,

Fig. 1



EDISON'S LATEST INVENTION—THE PHONOMOTOR.

tor, with the power exerted by the voice alone, the wheel may be set into quite rapid motion, and after a careful series of experiments with this new invention it will become possible to measure and compare voices with regard to their strength and pitch. Many interesting discoveries concerning our vocal machinery will no doubt be made by careful observation of this instrument. And even before any careful and exhaustive experiments have been made, it may become possible to apply the machine so that, in some kinds of work, the voice may supply the place of hands, in which case, those poor armless and one-legged soldiers from the Tyrol and other parts of Ireland and the United States, who sing about our streets, may be set at some profitable employment, and the hand-organs on our street corners may be used to grind corn.

The engravings on this page which are taken from the *Scientific American*, show how simple the contrivance is. Fig. 1 shows the phonomotor displayed so that all its mechanism appears. Fig. 2 shows the way in which the sound is applied to produce the motion.

A STACK of hay containing 30 or 40 tons, belonging to Saltzgeber & Rieder, dairymen, of Ione City, Amador county, was burned August 2d, and at 4 o'clock on August 3d their barn, filled with hay, met the same fate.

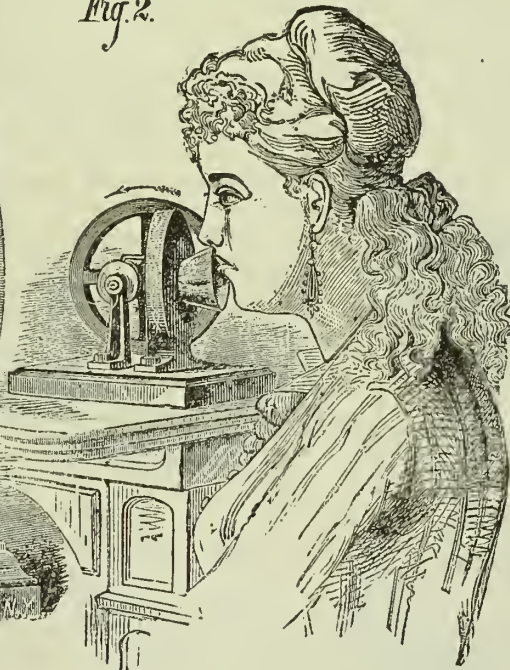
ACCORDING to official returns the wheat crop of France was 274,800,000 bushels in 1877, against 266,020,000 bushels in 1876. Latest mail advices indicate favorable prospects for an average yield of the wheat crop of 1878.

The Elephantine in Grain Threshing.

Each year mechanical progress as applied to grain threshing scores new marks on this coast. We have had frequent mention during the season of new appliances for harvesting, new devices for bringing the grain to the cylinder or the stack. In this issue will be found notes of the greater efficiency and speed which is being secured in separating the grain from the straw. In our "Agricultural Notes" creditable deeds, according to the different conditions prevailing, may be found in Alameda and Stanislaus counties. We also have the privilege of announcing results obtained by Mr. Hoag, of Colusa county, with a new 44-inch cylinder Gold Medal Separator, furnished him by Marcus C. Hawley & Co. He used with this separator Linnell's self-feeder and two 32-foot elevators, all driven by a No. 6 Rice straw-burning engine. He threshed in two and three-quarter days 1,000 sacks of wheat, getting 5,998 sacks of 135 pounds each, which gives an average per day of 2,180 sacks, or 4,900 bushels. He supplied the separator with eight 16-foot headers and 24 wagons. In the usual average of grain in other years in his section, in threshing the same amount of straw, he would have secured about 3,500 sacks, or 7,875 bushels per day. He calls his machine the "Monarch," and apparently with reason.

We learn from the *Guadalupe Telegraph*, that a large grain separator has been constructed

Fig. 2



upon the ranch of E. J. Preston, under his personal supervision, and from plans and ideas of his own; and the thorough and accurate manner in which each part performs its work, fully justifies the pride which the owner feels in his huge pet. It is called the "Red Elephant," from its size and color. The cylinder of this mammoth machine weighs 500 pounds, is 44 inches in length, has 12 bars, and 222 teeth; the shoe and the carrier are five feet in width, the axles, over eight feet in length, from wheel to wheel, and the box sets up high enough from the ground to obviate the necessity of digging holes for the sacks. The straw is furnished to the machine by two large derrick-forks, which lift half a ton at a time each out to the table, where four men fork it along, a few feet, to the self-feeder, which carries it into the massive jaws of the cylinder, in a constant stream, thus saving the labor and expense of several men, and working up a "setting" in half of the time occupied by other machines. The average capacity of the "Elephant," in good, fair working grain, is 2,000 sacks a day. It is run by a 16-horse power wood-burning engine.

AMERICAN HARVESTERS IN HOLLAND.—There has been a three days' trial of harvesters and binders at Middleburg, Holland. The first prize has been awarded to Walter A. Wood's machine, and the second to McCormick's. These machines distanced all competitors. This trial was made under the direction of a Dutch agricultural society, in connection with English and American machines, and the test is understood to have been severe. —*Alta*.

Infested Almond Trees.

EDITORS PRESS:—By this mail I send you some twigs and leaves of almonds, and also three or four insects which I find flying about on the trees. Perhaps they may be the ones that do the damage. What looks singular about the trees is that part of the tree looks thrifty except a branch here and there dying at the top. Others of the trees have lost nearly all the leaves, but don't seem to be dying but simply look like the fall of the year. I find that a good many of the nuts on the trees that are dying have been stung, and the gum oozes out. —S. WHITMORE, San Diego, Cal.

We have examined these specimens carefully with the microscope, but find nothing to which all the trouble described may be attributed. The insects which our correspondent sends are not malefactors. They are "ichneumon flies," a class of insects which are allies rather than foes of the farmer. It is their nature to pierce the egg larvæ or cocoons of other insects, deposit their own eggs therein, and thus destroy the insect which they attack.

We find no living insects on the leaves and twigs, but discover two minute cocoons which we lay aside for hatching. The holes in the leaves are of somewhat different character. Some are round and cleanly cut. Others are but partly cut around, and the cellular tissue remaining, and held in place by a small arc of the circle not cut, dies and turns black, thus giving the leaves a spotted appearance. The insect which cut these small circles seems to

have eaten out a narrow strip, like the rim of a wheel. These circular channels and particles of excreta are the only signs of insect work which we can discover. There is present on the worst attacked leaves the mycelium of a fungus, but this would seem to follow the injury to the leaf by the insects.

From an examination of the dead twigs, we learn nothing. The insect work, which we have described on the leaves, would not be enough to cause the death of terminal twigs. A careful examination of the wood shows no sign of twig borers or other insect injury. The appearance is rather that of a blight, and very much resembles, so far as we can judge from single twigs, the unex-

plained pear blight of the Eastern States. We are sorry Mr. Whitmore did not enclose one of the punctured almonds. The "stung" and "gum oozing" points are like the work of the plum curculio of the East, but there are other insects which pierce fruit for ovipositing.

A case of disease or insect depredation like that reported can be best studied on the ground, because there may be many indications which the closest examiner may never enjoy. We hope Mr. Whitmore will watch the trees as much as his leisure will permit, and see if he cannot catch the marauder at work on the leaves or the fruit, and study the twig dying, minutely noting all its conditions. The almond is one of the most fastidious and eccentric trees we have introduced in this State, and it must be studied carefully.

NORMAN PERCHERON FOR LOS ANGELES.—We had the pleasure the other day of seeing a massive Norman Percheron stallion, "Wide Awake," which Mr. I. M. Leihy was taking to Los Angeles. He is coming six years old, and weighs 1,800 pounds. He was imported from Normandy in 1877. The following is his recorded description, and it is well deserved: "Color, light gray, 16 hands high, fine intelligent head, high arched neck, deep through the shoulders, broad across the breast, short in the back, nice and square across the rump and stifles, a splendid flat bone, good feet, carries himself in fine style, and was awarded the first prize at Amiens, France, in 1876." "Wide Awake" will create a sensation in Los Angeles, we doubt not.

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We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes mis-carried, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency.

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We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

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The climate is generally healthy and comparatively desirable. The near proximity of high mountain peaks give cool nights during the "heated term" which occur in our California summers.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract. Also, Vegetables, Corn and all other cereals ordinarily grown in the State.

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Town Lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

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As a horse medicine it is superior to any liniment ever invented. For RINGBONE, SPRAIN, SWEENY, CALLOUS LUMPS, and all OLD SORES, apply freely so as to blister, from three to five days in succession, and in four or five days, if not cured, repeat as at first. SPRAINS, STIFF JOINTS, BRUISES, WINGGALLS, and all slight ailments, apply a small quantity so as not to blister. Saddle Sores, Cuts, and all other sores where the skin is broken, mix the liniment half and half with any kind of oil, and apply in moderation.

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As a scientific and mechanical representative of the Pacific Coast it is decidedly popular, and is a standard journal with the most thrifty industrial people of the Pacific States and Territories. Its authority is of the highest order, and its usefulness in its special sphere unrivaled.

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We take special pains also to furnish the best of SCANDINAVIAN, GERMAN, FRENCH and IRISH DOMESTICS. Gentlemen connected with the office, and speaking these languages, give us extended acquaintance with this class of help, and enable us to furnish the best to be had in San Francisco at very short notice. All orders promptly attended, free of cost to the employer. Address by letter or in person,

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Pocket Map of California and Nevada.

Compiled from the latest authentic sources, by Chas. Drayton Gibbs, C. E. This map comprises information obtained from the U. S. Coast and Land, Whitney's State Geological, and Railroad Surveys; and from the results of explorations made by R. S. Williamson, U. S. A., Henry Degroot, C. D. Gibbs and others. The scale is 18 miles to 1 inch. It gives the Judicial and U. S. Land Districts. It distinguishes the Townships and their subdivisions; the County Seats; The Military Posts; the Railroads built and proposed, and the limits of some of them; the occurrence of gold, silver, copper, quicksilver, tin, coal and oil. It has a section showing the heights of the principal mountains. The boundaries are clear and unmistakable, and the print good. 1878. Sold by DEWEY & CO. Price, postpaid, \$2; to subscribers of this journal, until further notice, \$1.



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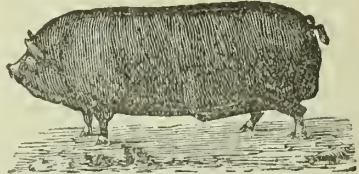


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My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER, 15th and A streets, Sacramento City, Cal.

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TO CATTLE BREEDERS.

A party owning a herd of first-class thoroughbred Durham Short-Horn Cattle, who proposes winding up business, would be glad to correspond with parties desiring to buy such a herd, or would receive proposals for handling them on shares from parties having a good ranch, well located for sales of young stock, and who thoroughly understands the handling of such stock. Address with full particulars, Lock-Box 131, Oakland, Alameda Co., Cal.

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18 ELEGANT new style Chrono Cards, with name 10c., postpaid. GEO. I. REED & Co., Nassau, N. Y.

Mr. Croft's Animals.

EDITORS PRESS:—I see in your last issue an inquiry by T. F. Croft, of Los Angeles, for a remedy for two animal diseases. The first is evidently a blood disease, and I will give a recipe that I have used in the Atlantic States, as well as in this State, and know it to be an excellent condition powder and very cheap. Take sulphur one pound, resin one-half pound, saltpeter one ounce, black antimony one-half ounce. Mix well. Give tablespoonful two or three times every day for 10 days.

I will give a remedy for poll evil fistula, or sweeny, to be applied to the two former at any time before matter forms, and if the drugs are pure and if directions are strictly followed I guarantee a cure every time.

Pulverized corrosive sublimate one ounce, camphor gum one ounce, stone oil one ounce, spirits of turpentine one-half pint. Mix and let stand two days, and shake often and well before using. Directions for using: Cut the hair short on the affected part; then grease all around the spot well; then rub the liniment on with the hand freely. Apply every day until it is blistered and yellow, and water stands in drops on the ends of the hair. Then stop the application, and in two or three days grease well all over. After the hair and skin have all cleaned off, which will be 10 days or two weeks, then apply a second time as above directed. I have never known more than two applications to be necessary.

I could give testimonials of good men in this city if necessary, but the experiment will prove itself. Do not understand me to say to grease the affected parts, but all around it, as the liniment will blister everywhere it touches if the drugs are pure. Keep grease off of the spots where the liniment is to be applied.

W. G. PENNEBAKER.

Farmersville, Tulare Co., Cal., Aug. 5th.

Wooden Cores in Levees.

EDITORS PRESS:—In your "Agricultural Notes," last issue, there is mention that in the building of some levees on the Sacramento river, they have tried the experiment of driving piles or planks through the center of the levee. This reminds me that I gave this subject considerable thought some years ago, and could see but one objection to such piling, and that was the rotting of the wood. Supposing the wood to be preserved, which it can be, then a four-inch plank run through the planing mill, so as to be of accurate thickness and width, grooved for a two by four-inch tongued driver as sheet piling, where the levee is to be made or repaired, and then heavily bolted to a 10 by 16-inch timber on the top of the plank, which will be the top of the levee, would make, if I am correctly informed about the way in which a river cuts away levees, a perfectly secure protection. If the water ran over, it would not cut away the levee from the top.

I. C. WOODS.

Mission San Jose, Cal.

THE DEEDS OF "RARUS."—In our issue of December 1st, 1877, we gave an engraving of the trotting gelding "Rarus," made from a drawing of the animal by Mr. Hill, when he was on this coast. Since "Rarus" has gone East he has distinguished himself by his speed, and bids fair to place himself indubitably at the head of the turf list. At East Saginaw, June 27th, "Rarus" trotted a mile in public, without any previous "opening up," without a skip, in 2:14; the first half being made in 1:07, and the second in 1:07. Afterward, at Cincinnati, he trotted a mile in 2:17, which was the best time ever made on a half-mile track up to that date; but at Toledo, July 20th, he still farther reduced that time to 2:16. Now comes the announcement that at Buffalo he trotted his mile in 2:13, which places "Goldsmith Maid's" 2:14 on the shelf, and proclaims "Rarus" peerless on the turf.

WHO GOT THE PIGS?—The importance of dealing only with those whom you know you can trust is no where greater than in live stock dealings. A pedigree should have a trustworthy breeder at its back. Californians have often been imposed upon, we have no doubt. The following, from a letter to the *Rural World*, shows that some one got poor Berkshires: "The following incident may give Mr. L. and many others an idea why certain breeds of pigs are 'too coarse' in certain localities. I know a professed breeder who, by some hook or crook, got his name up a good way from home, as many do, and he got an order for a first-class Berkshire boar from a man in California. Not having any Berkshires at hand, he went to a neighbor who had a little Berkshire mixed in his hogs. He selected the nicest marked pig, reduced the age about three months, put it in a crib, and sent it to the man in California, charging \$100 therefor. I presume, after the Californian bred Berkshires a while, he rejected the whole Berkshire breed as being 'too coarse.'"

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING JULY 30TH, 1878.

RAILWAY TRACKS—Amos Dowdall, S. F.
CAMP STOVES—Win. B. Collier, San Diego, Cal.
AUTOMATIC WATER LIFTER—Abraham Gregg, San Diego, Cal.
GRAIN THRESHER AND SEPARATOR—Byron Jackson, Woodland, Cal.
HARROW HINGES—Hugh S. Jory, Salem, Oregon.
SAMPLE CARDS—Sigismund Kutnow, S. F.
GLOVES—August Hesthal, S. F.
OIL CUPS—Alden D. Kilborn, Oakland, Cal.
FIRE HYDRANTS—Samuel Rainey, S. F.

TRADEMARKS.

ALE AND PORTER—Burnell & Simpkins, S. F.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

Notices of Recent Patents.

Among the Patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

VALVE.—Thos. Hennessey and M. H. Dorgan, S. F. The valve is of that class used for regulating the supply of water or other liquids to basins, tanks, etc. The improvement consists in so constructing a vertically moving valve as to close automatically by the action of the water. The valve has a long stem, extending upward into a recess in a spindle projecting through the top of the chamber, so that when it is desired to allow the water to flow the spindle is forced down by a screw lever or other means, thus hurrying the valve clear of its seat by means of the stem. By raising the spindle and relieving the downward pressure, the water in the supply tube, by its upward pressure, forces the floating valve into its seat and shuts off the water. This form of valve will be specially useful in cold climates, where water in the house pipes is apt to freeze at night. In such places it is customary to disconnect the house pipes from the mains and draw off the water from the house pipes, by opening a faucet in the lower part of main supply pipe. Thus all the faucets in the house have to be opened to admit air above, so the water can flow out. With the improved valve, as soon as the water below is turned off and pressure released, the valve drops from its seat and all the water in the house pipes runs off. When the water is again turned on the valve is forced to its seat, thus acting automatically in each instance.

VINEYARD PLOW.—Milton Ross, San Jose. The invention is in connection with that class of vineyard plows in which the rear end of the plow beam is adjustable, so as to throw the forward end of the beam either to or from the land side for the purpose of clearing the double-trees from the vines or other growing stalks, near which it is desired to plow, and it is especially applicable to a device previously patented by the same inventor. It consists of a novel application of adjustable handles, swiveled to a movable bar in combination with an adjustable beam mounted on a crank pin, or post, and in combination with a draft bar. It also consists of a method of locking and holding the various parts in proper position for ordinary or vineyard plowing, and whenever it is desired to plow close to the growing vines, trees or plants, etc. By using the peculiar locking devices the plow may be used for ordinary work also. The workman is always in a position to guide the plow while he can also walk clear of the vines. The handles can be raised or lowered to suit varying heights of men or to pass under limbs.

W. D. COMSTOCK'S FURNITURE HOUSE, SACRAMENTO.—Readers of the *RURAL PRESS* will please notice the advertisement of the above house. Having been established in 1868, and steadily increasing his stock, he is now able to offer to his patrons a fine assortment at the lowest market price, and solicits the trade of those in the county, and visitors from adjoining ones.

THE first planting of a field of wheat in the Portuguese settlement on Kern Island yielded 45 bushels to the acre with but one irrigation.

Woodward's Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a boa-constrictor have just been added. New stars are constantly engaged for the Pavilion exercises. Rates of admission as usual.

MR. W. J. WOODLEY, who took out a Canadian Patent some four years ago, is requested to call at the MINING AND SCIENTIFIC PRESS PATENT AGENCY OFFICE. Business of importance.

HEARING RESTORED.—Great invention by one who was deaf for 20 years. Send stamp for particulars. JNO. GARMORE, Lock-Box 905, Covington, Ky.

[Communicated.]

W. R. STRONG & CO.,

Fruit and General Produce House, Sacramento, Cal.

EDITORS PRESS:—As we look to pioneer life over a quarter of a century ago, it appears that but few of the early settlers that labored for the development and up-building of the Capital city through fire and floods still remain. The subject of this brief notice, Mr. W. R. Strong, has thus been identified with the progress of the city since 1852. On December 26th, 1849, he approached the State, but was blown back from off the heads by a storm, and did not enter port till January, 1850. He went direct to the mountains, and became engaged in quartz mining. In July, 1852, he opened a general fruit and produce house, No. 208 J street, doing a business from \$1,000 to \$1,500 per day. The large trade came from various sections of the mines, and the shipping was carried forward on what is known as "prairie schooners," drawn by six and eight span of mules or horses.

The principal orchards and vegetable gardens were then and still remain on the rich soil of the American and Sacramento rivers. It was not till 1854-5 that a large class of farmers entered and began settling on the vacant sites, and extended out on the open plains. Business prospered rapidly till the great fire of November, 1852, sweeping over 11 blocks. Not being daunted, like many others, Mr. Strong opened temporarily at Hoboken, now Brighton. In a short time he opened on J and Fourth streets, when he was again burned out in 1854. In 1855 Mr. Strong was found on the corner of K and Second, and in 1857 returned to 208 J street. In 1865 he moved down to his present site, No. 6 and 8 I street, near Front.

In extending his trade, Mr. Strong embraced every opportunity and outlet by steamer or railway as they were pushed forward. He opened relations with new firms in the principal towns and cities as they grew up throughout the State, and his connections now reach to San Diego on the south, to Siskiyou and Oregon on the north, and to Nevada, Utah, and adjoining territories on the east. He is also in direct communication with Chicago and New York. His firm always has stood the leading fruit firm from its very incipency, and still retains the position.

The principal bulk of green fruit handled and shipped is raised in the Sacramento valley and vicinity. The small fruits picked at Brighton and Florin; the choice grapes from the same places, including Elk Grove, also fruits from the Consummes; the fine Bartlett pears, apples, plums and prunes, from the orchards on the American and Sacramento rivers; all these are the material which the firm handles. There is also the large assortment of vegetables from the rivers, which with due notice can be picked and packed the same day, and pushing it way up the rugged mountains reach a cooler temperature by midnight, and retaining their freshness to the end of their journey. The business of the firm has increased largely this year. They are now shipping at the rate of 10 to 30 tons per day, or 100 tons per week.

W. R. Strong & Co. have paid particular attention to the seed business from early date. They largely import from Europe, especially from the firm of J. Monnier, France; also from New York, Philadelphia and various other States both north and south. To produce choice seeds, climate, soil and other specialties are taken in consideration, the same as fruits. For this reason the firm takes great pains to choose for their trade a large scope of country, keeping always the best selections from points that mature the finest quality. Peas are especially raised for the firm in Oregon. They deal largely in nuts; peanuts from Sacramento valley, pecans from Texas. They import also Sicily lemons from New York, limes from Mexico, oranges from Los Angeles, and honey from the best apiaries in the State.

In 1873, Robert Williamson became partner in the house. Being the owner of the Capital nursery, the firm has carried on trade in the season of planting, shipping choice fruit trees, temperate and semi-tropical, ornamental shrubs, etc.

This spring Mr. P. E. Pratt became the third partner. He is a young man of excellent business qualities, and a gentleman of high repute. He has the charge of buying and shipping, aided by the employer of the house.

The firm has just completed extensive improvements in their store, throwing two extensive rooms in one by an archway, extending the space backward, and leaving the store a frontage of 60 feet and a depth of 90 feet, having the largest and most spacious of any in the same trade in the State.

Those who visit the city or send communications will be kindly received, and all information will be given in their line of trade with promptness and dispatch. G. R. Sacramento, August 8th, 1878.

OCEAN VILLA, SANTA CRUZ.—Mr. Geo. H. Bliss, Proprietor of this flourishing watering place, offers large, well furnished rooms, single or in suites, to visitors. Also cottages for families that desire them. Grounds large, romantic and pleasant. Situated forty feet above tide water, having a beautiful view of the Bay, Ocean, City and Mountains. Premises extend to river's edge, affording rare facilities for boating, bathing and fishing. No pains spared to please guests. Address, P. O. Box 606. Santa Cruz, Cal.

POPULAR MUSIC.—Make your homes merry and popular with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. The *RURAL PRESS* can offer to introduce you there.

A GREAT COMPLIMENT.—A Grand Piano from Stehway & Sons, New York, which we saw and heard in Dr. Franz Liszt's Music Room, we must acknowledge as the grandest creation that modern science, in Piano building, has produced.—From the *New Leipzig Musik Zeitung*.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, August 14th, 1878.

The trade in Grain is daily assuming new features of interest, and, as noted elsewhere, the course of prices is generally favorable to producers.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday.....	10s	2d@10s	5d	10s	5d@10s	8d
Friday.....	10s	2d@10s	5d	10s	5d@10s	8d
Saturday.....	10s	2d@10s	5d	10s	5d@10s	8d
Monday.....	10s	2d@10s	5d	10s	5d@10s	8d
Tuesday.....	10s	2d@10s	5d	10s	5d@10s	8d
Wednesday.....	10s	2d@10s	5d	10s	5d@10s	8d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1876.....	9s	6d@9s	3d	9s	8d@10s	2d
1877.....	12s	3d@12s	6d	12s	6d@13s	2d
1878.....	10s	2d@10s	5d	10s	5d@10s	8d

The Foreign Review.

LONDON, August 13th.—The *Mark Lane Express* says: Reports regarding the yield of Wheat are various; but, generally speaking, the harvest promises an improvement on last year's. Conflicting accounts are received regarding Barley, but where early sown the crop will not leave much to be desired, although it has suffered from flood and drought. Very few samples of new wheat have appeared, and until supplies come in more freely little can be said regarding the quality. An occasional parcel was shown in Mark Lane, for which growers demand fancy prices, but business will probably settle down into its ordinary course this week. Supplies of old are necessarily very light, with such moderate inquiry as is to be expected during harvest time. Prices have undergone no quotable change. Imports of foreign Wheat into London are very moderate, Friday's return showing only 9,500 quarters. There was a decided improvement in trade, especially in American descriptions, for which ready sale was experienced at one shilling increase, and in some instances a greater advance. Much of the Russian Wheat recently imported arrived in a heated, unsalable state. Advices from St. Petersburg indicate that a very large proportion of garnered stocks is in a defective condition, and almost certain to heat during summer voyages. It is probable prices will rule low for this class of Wheat for some time to come. The somewhat unsettled weather and continued continental demand for Wheat, both here and in America, have imparted a firmer tone to trade. Values have improved from sixpence to a shilling for cargoes off coast and for shipment. Maize is nearly sixpence dearer. Barley is unsettled.

Freights and Charters.

The vessels which arrive under charter seem sufficient for immediate requirements of shippers, and unchartered vessels can only get low rates. The nominal rates are £2 and £2 5s. There are now in port 72,977 tons shipping engaged for Wheat, 74,491 disengaged, and 9,370 tons loading general merchandise.

Eastern Grain Markets.

CHICAGO, August 10th.—The grain markets the past week have been active, and yet not very interesting. Prices were weak at the opening, and lower than last week's close, but toward the end of the week they stiffened up and more than recovered their buoyancy. At the extreme close they were somewhat less than the best rates of the week. In Wheat, cash has come down to the nominal figure, and there seems slight danger of a corner now. Options are very firm, and in Milwaukee October strong and above all others. Sales September, 893@95½. Corn, September, 38½@39½. Oats, September, 24½@25½. Rye, 49½@52 for cash. Barley, 89@92½ cash; \$1.12@1.21½ September. Provisions were irregular, unsettled, and in pretty active demand, opening firm, and showing a stronger feeling throughout than characterized last week's markets. Sales September Pork, \$10.20@10.75. Lard, \$7.60@7.90. Closing cash prices: Wheat, 97c; Corn, 39c; Oats, 22½c; Rye, 51½@52c; Barley, 89½c; Pork, \$10.60, Lard, \$7.90c.

Eastern Wool Markets.

NEW YORK Aug 10.—Wool has shown firmness throughout, though but a limited demand has prevailed except for California, which has realized very full prices. A comparison of current quotation with those of a year ago reveals the fact that Western Fleece is 8@12c per lb lower now than then, and California 2@3c lower. It is generally admitted that Wool is low, but manufacturers claim that even with present prices it is difficult to place goods at a profit; hence there is a diffidence about stocking up with clothing Wool to any extent. The feeling for Combing and Delaine Fleeces is the reverse. Every available lot is readily taken up by manufacturers and all of this grade will be wanted. Sales of California foot up about 350,000 lb Spring clip, at 19@20c, with about

the same quantity in Boston at 18@28½c; besides which, 8000 lbs Oregon sold here on private terms and 3500 No 3 do in Boston at 24c Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks.

ARTICLES.	WEEK. July 24.	WEEK. July 31.	WEEK. Aug 7.	WEEK. Aug. 14.
Flour, quartersacks..	22,300	96,384	37,623	33,746
Wheat, centals.....	235,223	215,274	322,937	388,612
Barley, centals.....	18,757	28,076	36,303	30,983
Beans, sacks.....	275	87	15	130
Corn, centals.....	496	759	188	539
Oats, centals.....	1,361	3,294	3,551	11,902
Potatoes, sacks.....	12,001	11,126	7,203	8,375
Onions, sacks.....	330	318	554	1,123
Wool, hales.....	3,770	7,133	1,475	2,755
Hops, bales.....	27	13		
Hay, bales.....	1,525	2,202	2,406	2,579

BAGS—Bags are selling freely at the combination rate, 13½@13c.

BARLEY—Local rates have been advanced a little to meet the sharpened demand. There have been exports during the week to South America and Mexico. The best samples of ordinary and Chevalier Barley are in great request. We note sales: 1,200 sks bright Bay Feed, \$1.07½; 1,050 sks Coast Feed, \$1; 225 do, 92½; 1,300 do, 97½ per cwt.

BEANS—Few are in hand, and sales are made at old rates.

CORN—There is still a little Corn being taken for Mexico, but the trade is small, owing to small supplies. The last sale of White Corn was at \$2.50; Eastern Yellow is quoted at \$1.80 per cwt.

DAIRY PRODUCE—Fresh roll Butter is growing scarcer, and the price is ascending. Cheese also sustains a little higher range.

EGGS—Eggs are advanced, fresh California bringing 35@36c per doz.

FEED—Ground Feeds and Hay have not changed in price during the week. Hay receipts are, increasing considerably, but choice Wheat is still scarce and brings \$14. We note hay sales: A cargo of fair cow sold at \$7.75; 200 bales good, at \$10.75; 70 fair Wheat, at \$11.50; two cargoes common Stock, at \$6.50@7; two cargoes good Volunteer, at \$12; and several lots fair Stable, at \$8@9.

FRUIT—Green Fruit is working off at about the same rate as last week. The new crop of Dried Fruit is now coming in and advances prices a little.

FRESH MEAT—First quality Beef is unchanged, but lower grades this week are a little weaker. Pork also shades off ½¢ per lb. A choice line of Milk Calves is now bringing 10c.

HOPS—There is nothing in but tailings of the last crop, and these are without buyers. Consumers are waiting for the new crop.

LIVE STOCK—We note sales as follows: 1,000 Ewes sold at \$1.50 each; 1,000 Wethers, at \$2; 800 Lambs, at \$1.25; 50 head Cattle, at \$27 per head; 160 head do, \$20; 100 Cows, \$19.50 each; 2,000 Hogs, 5½¢ per lb; 1,000 do, at 5½¢ per lb; 700 do, at 5½¢ per lb. Cattle and Sheep sold for gold, and Hogs for silver. Two carloads of Calves sold at \$14 per head, gold.

OATS—Oats are selling in small lots at last week's rates. We note sales of 1,000 sks good Coast Feed at \$1.40; small lots of choice sold lately at \$1.70 per cwt; 60 sks fair, \$1.42½; 207 black, \$1.55. The Oregon steamer brings 1,900 cts.

ONIONS—The ruling price for good Onions of nearly all kinds is \$1 per cwt.

POTATOES—Potatoes are unchanged, except sweet, which are now selling at \$1.50@2.

PROVISIONS—The Provision trade is quiet, the only notable feature being a fractional advance in California cured Hams and Bacon.

VEGETABLES—A few minor changes are noted in our list.

WHEAT—The improved feeling of the week is commented upon elsewhere. We note sales of 3,440 cts choice Shipping, and 1,790 cts strictly choice Walla Walla at \$1.75; 4,800 cts Walla Walla, on wharf, \$1.72½; 2,000 sks good Shipping, \$1.72½; 3,000 Walla Walla, \$1.70; 200 cts inferior, \$1.50; 500 cts choice Milling, \$1.80; 4,000 and 6,000 cts good Shipping, sold for August delivery, \$1.71½; 1,000 fair Shipping, on the spot, \$1.71½; 9,700 cts choice Shipping, \$1.75; 5,000 do, at Oakland wharf, \$1.75; 1,500 do, \$1.73½; 4,000 and 1,000 good Shipping, \$1.72½; 1,600 fair Shipping, \$1.67½; 800 of grade, \$1.65; 3,000 pinched, \$1.62½; 800 superfine, \$1.60; 191 mixed with cheat, \$1.57½. A straight lot of 20,000 cts Shipping sold at Vallejo at \$1.70; 4,000 at \$1.72½; 5,000 and 5,000 cts good Shipping, \$1.72½. A lot of 1,400 cts gilt edge Milling sold to-day at \$1.80 per cwt, delivered at Oakland.

WOOL—Fall Wools are coming in in small lots, and such as are coming are more or less scedy and burry. There have been some small sales at 12½¢@15. Of course there has not yet come enough to establish prices for the clip. The stock of Spring Wool is mostly cleaned up except Oregon's, which have moved rather slow. There has been but little Wool sold during the week. One house reports sale of 45,000 Oregon at 22½¢.

Gold, Legal Tenders, Exchange, Etc

[Corrected Weekly by SUTRO & CO.]

SAN FRANCISCO, August 14, 3 P. M.
LEGAL TENDERS in S. F., 11 A. M., 99½@99.90. SILVER, 1½¢@1½¢. GOLD in New York, 100½.

GOLD BARS, 890@910. SILVER BARS, 89@15 per cent. discount.

EXCHANGE on New York, 1½¢; on London bankers, 49¢@49½. Commercial, 50¢; Paris, 4½¢; France, 4½¢; Mexican dollars, 94¢@95.

LONDON Consols, 95½; Bonds, 108½.
QUICKSILVER in S. F., by the flask, 42¢@45¢.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., August 14, 1878.

BEANS & PEAS.		FILBERTS.		ONIONS.	
Bayo, cts.....	5 75 @ 6 00			Alviso.....	— @ 1 00
Butter.....	4 25 @ 4 50			Union City, cts.....	— @ 1 00
Pea.....	4 50 @ 5 00			San Leandro.....	1 00 @ 1 00
Red.....	4 50 @ 5 00			Stockton.....	75 @ 1 00
Pink.....	4 50 @ 5 00			Sacramento River.....	75 @ 1 00
Sm't White.....	4 50 @ 5 00			San Pedro.....	62½ @ —
Lima.....	4 25 @ 4 50			Oregon.....	— @ —
Field Peas.....	1 10 @ —				
BROOM CORN.		POTATOES.		CHICORY.	
Old.....	3½ @ 7	Petaluma, cts.....	1 00 @ 1 25	California.....	4 @ 8
New.....	4½ @ 8	Humboldt.....	— @ —	German.....	6½ @ 7
DAIRY PRODUCE, ETC.		POULTRY & GAME.		BUTTER.	
Cal. Fresh Roll, lb	27½ @ 30	Snipe, Eng.....	3 00 @ —	Fancy Brands.....	30 @ 32½
Pickle Roll, new.....	25 @ 27½	Hens, doz.....	7 00 @ 8 50	Pickle Roll, new.....	12 @ 16
Fresh Milk, doz.....	12 @ 16	Broilers.....	5 00 @ 6 50	Western Reserve.....	12½ @ 14
Western Reserve.....	12½ @ 14	Ducks, tame.....	5 00 @ 6 00	New York.....	— @ —
Old.....	— @ —	do, Mallard.....	— @ —	Cheese, Cal., lb.....	8 @ 12½
Cal. Fresh, doz.....	35 @ 36	Geese, pair.....	1 50 @ 2 00	Eastern.....	10 @ 12
Ducks.....	— @ 30	White do.....	— @ —	N. Y. State.....	— @ —
Oregon.....	27½ @ 28	Turkeys.....	20 @ 23	Gilroy Factory.....	11 @ 13
Eastern.....	18 @ 22	do, Brood.....	— @ —	Cal. fresh, doz.....	35 @ 36
do Pickled.....	— @ —	Snipe, Eng.....	3 00 @ —	Ducks.....	— @ 30
FEED.		RABBITS.		Oregon.....	27½ @ 28
Bran, ton.....	15 00 @ 16 00	Ilare.....	3 00 @ 4 00	Eastern.....	18 @ 22
Corn Meal.....	42 00 @ 43 00	Venison, lb.....	8 @ 12½	do Pickled.....	— @ —
Hay.....	7 00 @ 14 00	PICOVINS.			
Niddlings.....	22 50 @ —	Cal. Bacon, Hvy, lb	11½ @ 12½		
Oil Cake Meal.....	34 00 @ —	Medium.....	12 @ 12½		
Straw, hales.....	25 @ 60	Light.....	13 @ 13½		
FLOUR.		do.....	11 @ 13		
Extra, bbl.....	5 12½ @ 62	Cal. Smoked Beef	10 @ 11		
Superfine.....	4 25 @ 50	do, Eastern.....	— @ —		
Graham.....	25 @ 31	Shoulders, Cover'd	7½ @ 8½		
FRESH MEAT.		Hams, Cal.....	12½ @ 13½		
Beef, 1st quality, lb	5½ @ 6½	Dupece.....	14 @ 15		
Second.....	4 @ 4½	Seal.....	14 @ 15		
Third.....	2½ @ 3½	Boys'.....	14 @ 15		
Mutton.....	4 @ 5	Ames.....	15 @ 15½		
Spring Lamb.....	6 @ 7	Whittaker.....	— @ —		
Pork, unpressed.....	5 @ 5½	SEEDS.			
Dressed.....	7½ @ 8	Alfalfa.....	5 @ 12		
Veal.....	6 @ 7	Canary.....	6 @ 8		
Milk Calves.....	8 @ 9½	Clover, Red.....	15 @ 16		
do choice.....	10 @ —	White.....	50 @ 55		
GRAIN, ETC.		do.....	6 @ 10		
Barley, feed, cts.....	90 @ 107½	Flaxseed.....	3½ @ —		
Brewing.....	110 @ 115	Italian Rye Grass	35 @ —		
Chevalier.....	175 @ 180	Perennial.....	35 @ —		
Buckwheat.....	175 @ 180	Millet.....	10 @ 12		
Corn, White.....	25 @ 30	Mustard, White.....	2½ @ 3		
Yellow.....	195 @ 200	Brown.....	14 @ 2		
Small Round.....	2 00 @ 2 05	Rape.....	20 @ 4		
Oats.....	125 @ 150	2d quality.....	18 @ —		
Milling.....	155 @ 170	Sweet V Grass.....	1 00 @ —		
Rye.....	17 @ 20	Orchard.....	25 @ 30		
Wheat, Shipping.....	165 @ 175	Red Top.....	18 @ 20		
Milling.....	170 @ 180	Hungarian.....	8 @ 10		
HIDES.		Lawn.....	50 @ —		
Hides, dry.....	16 @ —	Mosquit.....	— @ 25		
Wet.....	7½ @ 9	Timoth.....	9 @ —		
HONEY, ETC.		TALLOW.			
Beeswax, lb.....	30 @ 31	Crude, lb.....	7½ @ 8		
Honey in comb.....	11½ @ 12	Rofined.....	9½ @ 9½		
do, No 2.....	8 @ 10	WOOL, ETC.			
Dark.....	8 @ 10	Spring.....	17 @ 19		
Strained.....	5 @ 6½	S. Joaquin, 12mo free	17 @ 19		
HOPS.		do 6 & 7 mo do	12 @ 13		
Oregon.....	3 @ 5	Buoy, 12 mo do	12 @ 13		
California.....	4 @ 7	do 6 mo do	14 @ 15		
Wash Ter.....	4 @ 6	Seabury.....	12½ @ 15		
NUTS—Jobbing.		South'n Coast, free	16 @ 19		
Walnuts, Cal.....	8 @ 9	do do burry	14 @ 16		
do Chile.....	7 @ 8	do Northern, free.....	22 @ 24		
Almonds, hd sh lb	7 @ 8	do, seedy & burry	18 @ 20		
Soft sh lb.....	14 @ 16	do, Halves.....	18 @ 22		
Brazil.....	14 @ 16	Nevada.....	22 @ 24		
Pecans.....	13 @ 14	Oregon Valley.....	22 @ 24		
Peanuts.....	5 @ 6	do, Eastern.....	17 @ 20		

FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., August 14, 1878.

FRUIT MARKET.		PEACHES.		Pears.	
Apples, box.....	40 @ 1 00	do pared.....	18 @ 9	do.....	6 @ 10
Apricots, lb.....	2 @ 3	Pears.....	6 @ 10	Plums.....	3 @ —
Bananas, bnch.....	— @ —	Pitted.....	15 @ —	Prunes.....	14 @ 10
B'cherries, cbst 200	4 @ 5 00	Raisins, Cal, bx	1 00 @ 1 66	do.....	10 @ 1 66
Coconuts, 100.....	4 00 @ 5 00	do, Halves.....	1 50 @ 2 50	do, Quarters.....	1 50 @ 2 50
Figs, lb.....	40 @ 75	Blowers.....	2 75 @ —	Malaga.....	2 75 @ 3 00
Grapes, com, hds.....	75 @ 1 00	Zante Currants.....	8 @ 10	VEGETABLES.	
Grapes, Must, do.....	75 @ 1 00	Beets, cts.....	62½ @ —	Beans, String.....	1½ @ —
Limes, Mex.....	6 00 @ 7 00	do.....	50 @ —	Cantaloupes, case	2 50 @ 5 00
do, Cal, per M.....	5 00 @ 7 50	Carrots, cts.....	50 @ 63½	do.....	50 @ 63½
Lemons, Cal M.....	— @ —	Cauliflower, doz	50 @ 75	Cucumbers, h.....	25 @ 40
Sicily, h.....	9 00 @ 10 00	do, New, lb.....	2 @ —	Green Corn.....	2 @ 7
Mangoes, 100.....	3 00 @ —	Green Peas.....	13 @ 2	do.....	13 @ 2
Oranges, Mex.....	— @ —	do.....	10 @ —	Lettnce, doz.....	1 @ 3
do.....	15 00 @ 20 00	do.....	2 @ —	do.....	3 @ —
Cal.....	— @ —	do.....	7 @ 8	do.....	3 @ 5
do.....	— @ —	do.....	1 @ —	do.....	3 @ 5
Peaches, box.....	50 @ 1 00	do.....	1 @ —	do.....	3 @ 5
do, basket.....	30 @ 1 25	do.....	1 @ —	do.....	3 @ 5
Pears, box.....	25 @ 75	do.....	1 @ —	do.....	3 @ 5
do, Bartlett.....	1 00 @ 1 25	do.....	1 @ —	do.....	3 @ 5
Pineapples, doz.....	1 @ 1 25	do.....	1 @ —	do.....	3 @ 5
Plums, lb.....	1 @ 3	do.....	1 @ —	do.....	3 @ 5
Prunes, lb.....	3 @ —	do.....	1 @ —	do.....	3 @ 5
Raspberries, lb.....	9 @ —	do.....	1 @ —	do.....	3 @ 5
St'cherries, cbst 200	5 00 @ 5 50	do.....	1 @ —	do.....	3 @ 5
DRIED FRUIT.		do.....	1 @ —	do.....	3 @ 5
Apples, lb.....	5½ @ —	do.....	1 @ —	do.....	3 @ 5
do new.....	9 @ —	do.....	1 @ —	do.....	3 @ 5
Apricots.....	15 @ —	do.....	1 @ —	do.....	3 @ 5
Citron.....	23 @ 24	do.....	1 @ —	do.....	3 @ 5
Dates.....	9 @ 10	do.....	1 @ —	do.....	3 @ 5
Figs, Black.....	4 @ 7	do.....	1 @ —	do.....	3 @ 5
White.....	6 @ 8	do.....	1 @ —	do.....	3 @ 5

LEATHER.

[WHOLESALE.]

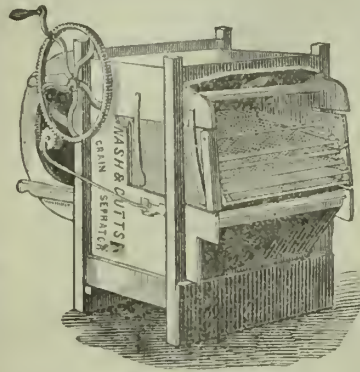
WEDNESDAY M., August 14, 1878.

Sole Leather, heavy, lb.	22 @	22
Light.	20 @	20
Jodot, 8 Kil, doz.	48 @	48
11 to 13 Kil.	65 @	65
14 to 19 Kil.	80 @	80
Second Choice, 12 to 15 Kil.	55 @	55
Corrian, 12 to 16 Kil.	57 @	57
Females, 12 to 13 Kil.	63 @	63
14 to 16 Kil.	71 @	71
Simon Ullmo, Females, 12 to 13 Kil.	68 @	68
14 to 15 Kil.	66 @	66
16 to 17 Kil.	72 @	72
Simon, 18 Kil.	61 @	61
20 Kil.	65 @	65
24 Kil.	65 @	65
Robert Calf, 7 and 9 Kil.	35 @	35
Kips, French, lb.	1 00 @	1 35
Cal. doz.	40 @	40
French Sheep, all colors.	8 @	15
Eastern Calf for Backs, lb.	1 00 @	1 25
Sheep Roams for Topping, all colors, doz.	9 @	13
For Linings.	5 50 @	10 50
Cal. Russet Sheep Linings.	4 @	—
Good French Calf.	4 00 @	4 25
Best Jodot Calf.	5 00 @	5 25
Leather, Harness, lb.	35 @	38
Fair Bridle, doz.	48 @	72
Skirting, lb.	33 @	37
Welt, doz.	30 @	35
Buff, lb.	18 @	—
W. Side.	17 @	—

Agricultural Articles.

THE BEST IS THE CHEAPEST.

NASH & CUTTS' PATENT



GRAIN SEPARATOR AND FAN MILL.

THREE SIZES—Warranted to Clean from 60 to 200 bushels per hour, perfectly.

PRICES—No. 1, \$35; No. 2, \$45; No. 3, \$62.

The Nash & Cutts' Machine is the only machine that has taken the First Premium at California State Fairs in 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877.

Nash & Cutts' Machine will thoroughly separate Mustard Seed, Cheat, Barley, Oats, Cracked Wheat, etc., from Wheat in a rapid and satisfactory manner.

No zinc sieves used in the Nash & Cutts' Grain Separator and Fan Mill; therefore we can

Clean Faster, Better, and with Less Work and Trouble.

Than any other machine now in use.

The Nash & Cutts' Machine is the only one that will clean Alfalfa Seed. All we ask of any one in want of a Grain Separator is to give the Nash & Cutts' a trial.

EVERY MACHINE FULLY WARRANTED.

The Nash & Cutts' Machine is for sale by all Agricultural Implement Dealers in California.

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NASH & KLEES,

No. 264 K Street, Sacramento, Cal.

Only manufacturers of the Nash & Cutts' Grain Separator for the Pacific Coast.

BAKER & HAMILTON, Sole Agents,

San Francisco and Sacramento.

The Famous "Enterprise"

(PERKINS' PATENT
Self Regulating

WINDMILLS,

Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbitted boxes.

Positively self regulating, with no coil springs or springs of any kind. No little rods, joints, levers or hells to get out of order, as such things do.

Mills in use six to nine years in good order now, that have never cost one cent for repairs.

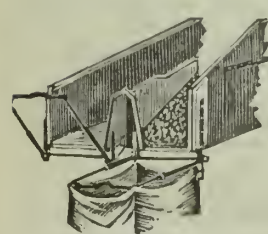
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HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

To Threshers.



Hold Your Bags

Save

MONEY!!

FILL

THEM

FULL.

Shake Them Down

HOW? USE THE

"CALIFORNIA SACKHOLDER."

Simple, Cheap,

Adjustable to any
Sized Bag.

LONG,

SHORT,

WIDE,

Or Narrow.

Completest Device Ever Invented
and Lasts a Lifetime.

Discount to the trade. General Agency for the Pacific Coast,

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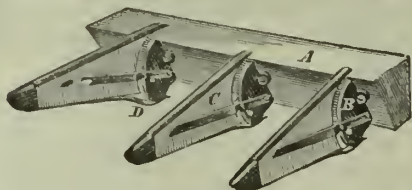
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BAKER & HAMILTON,

San Francisco and Sacramento.

BONNEY'S PATENT

Adjustable Grain Lifter for Headers.



All farmers who wish to save grain without waste in cutting, should examine these. They can be run at any inclination to the ground, as seen at D in cut. Are light, strong and durable, and can be adjusted in 15 minutes, or removed in five when not required, by drawing bolt in malleable shank B. Set of 8 for 10-foot header, (in putting on which bore with 1/4-inch bit for lag screws) are the cheapest and give the best satisfaction of any in use. Parties can save additional the cost of a set in one day's cutting, where grain is lodged or trinkles down. Price, \$40. Also, Grain Belts, Header Sticks, etc. Manufactured for

BAKER & HAMILTON,

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MATTESON & WILLIAMSON'S



Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over erratic knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,

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HAY PRESSES.

JOHN H. GOVE'S PATENT IMPROVED

Centennial & Eagle Hay Presses,

MANUFACTURED BY HIM AT THE

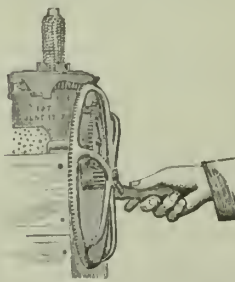
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Are the best made, combining Strength, Durability, and Compactness. Send for Circular. Post Office Box, 1122. Also, for sale by

David N. Hawley, 201 & 203 Market St.,

Cor. of Main, San Francisco.

Peerless Corn Sheller.



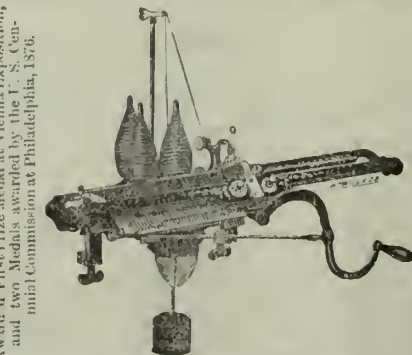
It is so cheap (costing only \$6), that almost any one can afford to buy one. It is so rapid, it will shell almost as fast as a \$40 machine, and seven or eight bushels per hour is not above its capacity. It weighs only 13 pounds and is simple and durable. For particulars, address

WEISTER & CO.

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THE IMPROVED.

Lamb's Family Knitting Machine.

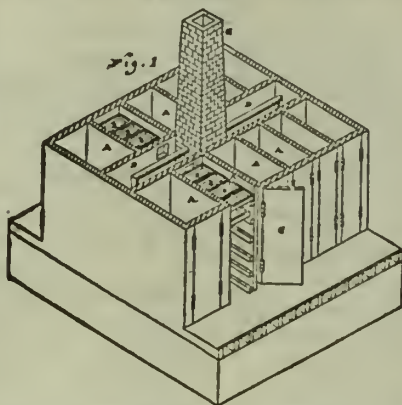


IT IS THE ONLY MACHINE That knits flat or tubular work of all sizes; Narrows and widens on hosiery or tubular work; Knits a regular right-angled heel, as by hand; Narrows off the toe; Knits a sock or stocking complete; Knits mittens or gloves of any size without seams; Forms genuine Ribbed or Seamed work; Knits the Double, Flat, or Fancy webs; Knits an elastic seam-stitch Suspender with button-holes; Knits the Afghan stitch, Cardigan Jacket stitch, Fancy Ribbed stitch, the Raised Plaid stitch, the Nabis stitch, Shell stitch, Unique stitch, Tidy stitch, etc. It is now the standard machine for manufacturing, and the only family knitter that fills the bill. Local agents wanted. Send for circulars to

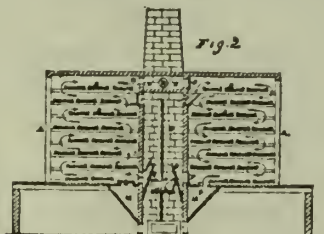
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Engraving done at this office.

Blowers' Patent Fruit Drier.



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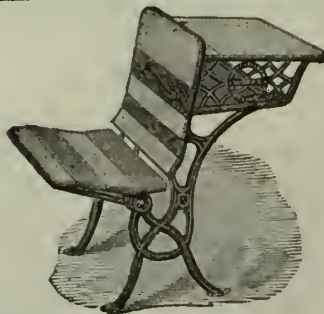
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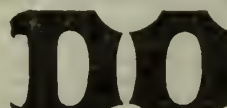
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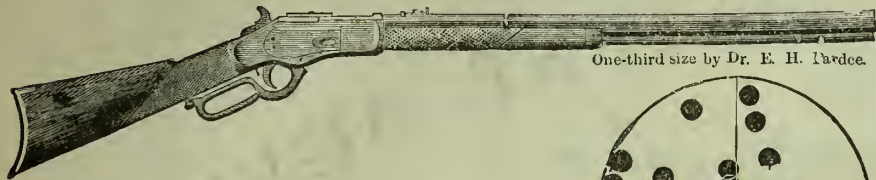
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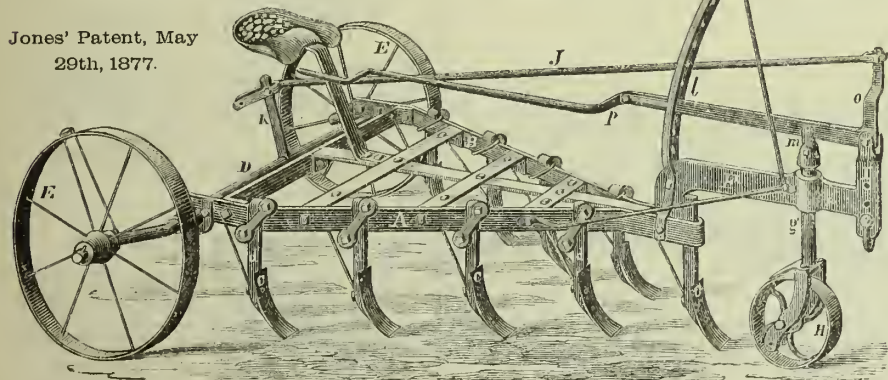
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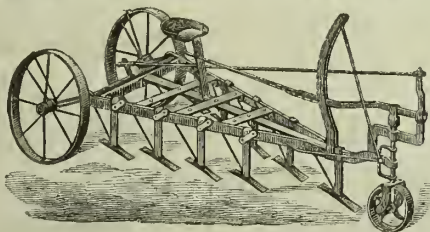


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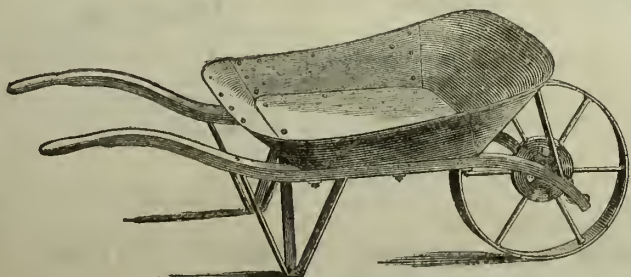
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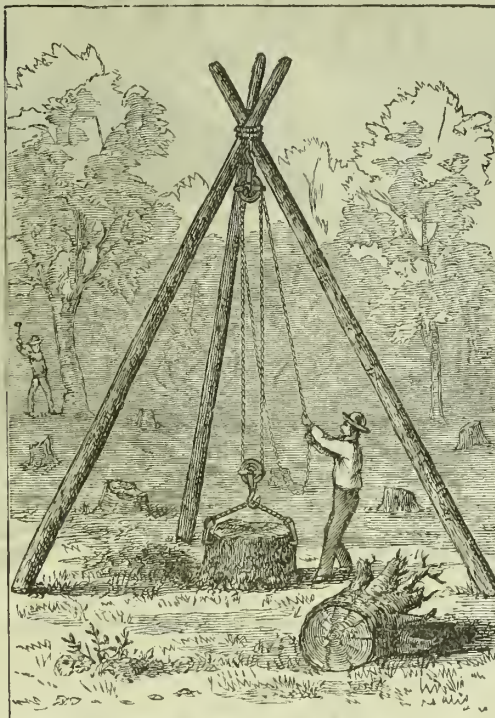
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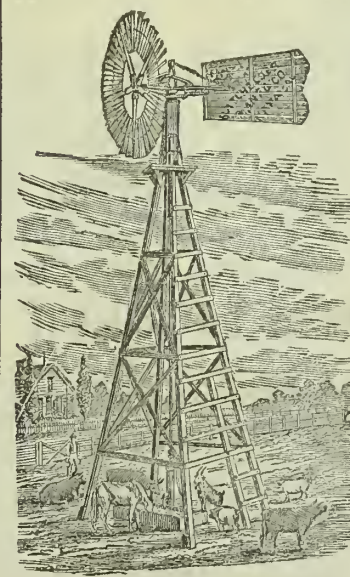
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Messrs. Dewey & Co., Patent Solicitors—Gentlemen:—On the first of June I made application for Letters Patent for an improvement on a fire-resisting and non-conducting compound through your Patent Agency, and was agreeably surprised to receive official notice that the patent had been allowed on the 15th day of June, in the unprecedented short time of fifteen days from the time it left here.

This is the seventh patent which I have procured through your Agency, entire satisfaction being given in each case, and I shall take great pleasure in recommending your firm for reliability and promptness to all inventors with whom I may come in contact.

I have now two more cases ready, and shall make the application through your Agency.

Yours Truly, GEO. R. EVANS.

PACIFIC RURAL PRESS.—This well edited and popular agricultural organ, published by Dewey & Co., San Francisco, by its steady and untiring zeal in advancing the best interests of the Grangers of the great West, has fairly won the proud title of "Banner Journal" on the frontier of civilization. Not a line is admitted to its columns but that is of value to the farming interests of the country. Subscribe at once for the new year. The terms are remarkably low—only \$4 per annum, postage prepaid.—*Mountain Messenger*, Dec. 16th.

SETTLERS and others wishing good farming lands for sure crops, are referred to Mr. Edward Frisbie, of Anderson, Shasta County, Cal., who has some 15,000 acres for sale in the Upper Sacramento Valley. His advertisement appears from time to time in this paper.

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Title—United States patent.

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Soil—Without exception the richest on the coast.

Water—Abundant. A failure of crop has never been known.

Wood—Sufficient for fire and fencing.

Agriculture—The soil, climate and situation render this property particularly adapted to those who wish desirable homes at a short distance from San Francisco. With the exception of tropical fruits, anything that grows in California can be produced upon this land.

This rancho, famous for its dairies, is now being subdivided into 20, 40 and 80-acre farms, under the auspices of the California Immigrant Union, and will be sold at low figures.

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DIXIE FRUIT PICKER. Patented, 1877. Sent by mail for 50 Cents. Address, W. H. DELANO, San Leandro, California.

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We are this year again able to offer very fine plants, with a great abundance of flower buds. Purchasers will find that the flowers will in one season return more than the cost of the plants. Among them are *C. candidissima*, *alba plena*, and the other good whites, as well as the best colored kinds. Chinese *azaleas*, very fine and at low rates.

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ESTABLISHED 1868.

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ST. PAUL'S CHURCH, CALIFORNIA ST. near FILLMORE. Dear Sir—In reply to your enquiry of our Burdett Organ from your Music store, it affords me great pleasure to say it has given perfect satisfaction. Now in its third year here, and used at all our services and taxed with rehearsals, its strength and sweetness of tone continue unimpaired. Certainly you may see my name as a reference. Yours &c., JAMES MC ELROY.

After Two years use.

Dear Sir. The Burdett Organ sold to me in 1876 has fully come up to all requirements and proved to be all that could be desired. You can refer to me if you choose. Truly Yours, H. JACKSON. Waterville, June 14th, 1878.

After Seven years use.

PLACERVILLE, June 24th, 1878. Mr. GRAY: Dear Sir—The Burdett Organ purchased of you in 1871, for durability of construction and superiority of tone, in my opinion is not surpassed by any instrument to my knowledge in use. Yours, F. M. DICKERHOFF.

After Eight and Six years use.

OLYMPIA, W. T. June 20, 1878. Dear Sir—In 1870 I purchased a Burdett Organ of you, and in 1872 another. They have been in use ever since and are in good order now. Respectfully Yours, J. G. PARKER.

After Seven years use.

SONORA, June 25, 1878. The Burdett Organ purchased by me in April 1871, has given general satisfaction, and compares favorably with others of the same capacity, is yet in good order and cost nothing for repairs since purchased. D. SEWELL.

After Three years use.

ST. CATHERINE'S ACADEMY, BENICIA, June 15, 1878. Mr. GRAY: Dear Sir—The Organ purchased from you has given entire satisfaction, and though I have used it a great deal it is still an excellent instrument. Yours Respectfully, SISTER EMILY.

General Agency for the Pacific Coast

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This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y.

PACIFIC RURAL PRESS

Volume XVI.]

SAN FRANCISCO, SATURDAY, AUGUST 24, 1878.

Number 8.

Cotswold Sheep.

There are several changes now in progress in the sheep husbandry of this coast. First, because the areas under cultivation are gradually closing in upon the large pasturage ranges, there is being a reduction in the size of flocks. Second, because of the increased number of months to feed, there is a growing value in the carcass as well as in the fleece, and there is good profit in turning in early a fine lot of lambs for the butcher. Third, in the progress of mixed husbandry in this State, there is a spreading disposition to keep small bands of sheep on ranches which have not formerly known the tread of the "golden hoof." Fourth, both in this State and Oregon the sheep is coming into wider utility as an auxiliary in cleaning up new lands, the precept going forth that the "sheep is a better grubber than the Chinaman." These general changes bring in their train another, which is of no little moment, and that is a wider disposition toward better handling of sheep, both in matter of stamping out disease, in providing a constant supply of feed and in protecting the animals from the inclemency of our winters.

These things being tendencies of the day, it follows that there may be opportunities for diversifying our breeds of sheep somewhat with advantage. For those who find a chance for good work in marketing early lambs and heavy fat mutton, there is an opportunity to introduce more of the mutton element in their flocks; and where the intent prevails to give the sheep better treatment than our frugal and hardy merinos have generally received, the other blood may be safely used. It may be found that breeds which have not been considered profitable or satisfactory under the old policy and methods, may be successful under the new.

With this in view we have thought a few facts concerning the Cotswold sheep and a pretty engraving of some individuals of the breed would be of general interest. The sheep have already been introduced on this coast, and we have heard good words of them, but they have never been widely disseminated, because, as we have hinted, the old aims and methods of sheep husbandry in this State were better met by other breeds.

The Cotswold is one of the oldest of the English breeds of sheep, and it was, before it was improved by the introduction of the Leicester blood, the largest sheep in the old country. By the Leicester infusion the Cotswolds gained

fleece and form. The main advantages of the present Cotswolds are early maturity, thus putting on a good weight of mutton at an early age. Authorities state that the sheep is often fattened at 14 months old, yielding 15 to 20 pounds per quarter, and 20 to 30 pounds if kept until two years old. It would probably be found that this extreme weight of fat was not desirable in our market, certainly not to the extent which fat mutton is called for in the English markets. Rather would the advantage here be in the early maturity so that good, heavy lambs could be marketed, say in the fall when the rich consumers are willing to pay well for fine lamb. The size and weight of fat could be ameliorated by crossing the Cotswold upon our smaller breeds.

The wool of the Cotswold is six to eight inches long, and sometimes much longer. It is ranked

favorite and most widely disseminated long-wool sheep in the Eastern States. They are grown there both for their heavy fleeces and for their early maturing and large-sized lambs. A trustworthy breeder in the Mississippi valley, Mr. Asa Coombs, gives the following interesting figures of the results he gained by crossing the Cotswold upon common sheep in the direction of weight of carcass. He had a lot of 200 lambs got by breeding common ewes to a pure Cotswold buck. The lambs were weighed at different times, from June 8th to August 26th. At first 80 head were weighed June 8th, and averaged 74 pounds; 40 head weighed July 12th, averaged 76 pounds; the remaining 80 head were weighed August 26th, and averaged 83 pounds. The average of all the weighings is 77½ pounds. The old ewes from which these lambs were bred were weighed December 1st

The State Fair.

From a correspondent we learn that the efficient Secretary of the State Agricultural Society, Major Robert Beck, is hastening the many improvements to be made to the pavilion and park, and that everything will be in readiness by the time set to open the fair, September 16th. Among the many improvements and alterations being made for the comfort and convenience of exhibitors and visitors at the pavilion, might be mentioned a grand balcony on the west side of the hall, 126x18 feet, with two rows of seats. New stairs seven feet wide have been put up between the lower and upper halls. A new floor has been laid in the new hall on the east and all the shafting and gearing has been removed to a building in the park 80x90 feet, erected especially for the exhibition of machinery. The department from which it was removed will be devoted to the exhibition of vegetables, fruits, and flowers.

An amphitheatre is being erected at the park for the exhibition of stock. The building is in the form of a double octagon, having 80 feet in diameter, 16 sides and 16 angles. Forty feet around the center pole will be furnished with seats for the use of visitors, and the remaining space will be devoted to the exhibition of stock.

The stands in the park have been enlarged and improved and have a seating capacity for 6,000 people. Provision has also been made for stabling for 500



COTSWOLD EWE LAMBS, 11 MONTHS OLD, OWNED BY T. L. MILLER, OF BEECHER, ILL.

as strong and somewhat coarse, and the weight of fleece is very great. The wool has been found to possess valuable qualities when upon finer breeds. The result of such a cross, as practiced in Colorado, is described by a well-informed writer as follows: "In my visits to the plains, among the flocks of sheep I met with one flock of 6,000 sheep that had been bred to Cotswold rams. This flock was kept in divisions of 2,000 each, about two miles apart. They were never corralled or yarded, but wherever night found them camp was struck, and the sheep gathered about the camp as quietly as on Eastern farms. The second and third crosses had all the quality, style and size of the Cotswold, and the fleece of the third cross would sell in Boston as combing wool."

The handsome lambs shown in the engraving upon this page are from the flock of T. L. Miller, of Beecher, Illinois, who has already been introduced to our readers as a breeder of fine stock of different kinds. These lambs are superior specimens of a breed which is th

following, and averaged 92 pounds. It appears therefore that the lambs must have gained considerably upon their mothers from a single Cotswold cross.

All these facts are of interest. The wisdom of bringing the Cotswold to bear upon our established grades of fine wool instead of improving the fineness and weight in the line of the thoroughbred fine wools, might well be disputed, but in the era of small flocks and flocks for mutton which is now dawning, we are sure that the Cotswold has a place.

IN THE YOSEMITE.—We have a card from Prof. J. G. Lemmon, from the Yosemite, stating that he arrived in the valley with a Santa Barbara party, July 26th. He proposes leaving the party for a week's cruise alone among the high peaks of the Sierras, and we hope to have a letter describing his "finds," botanical and otherwise, in that lofty region.

THE Colorado potato beetle is putting in his work way down east in the State of Maine.

animals, together with large and convenient pens for sheep, Angora goats, swine, and coops and cages for fowl. In fact the appointments and accommodations are confidently believed to be superior to any other agricultural society in the union. The officers feel assured that the fair will be a grand success.

CUPID AN INSECT.—We are glad to know that the winged chap who has so troubled the course of history, and who has baffled science hitherto, has now been classified. John Monteith, secretary of the Missouri Board of Agriculture, in alluding to the departure of U. S. entomologist Prof. C. V. Riley to Washington, says: "A little fellow belonging to the order *Diptera*, that had been trying for many years to find a joint in the Professor's harness through which to slip his delicate shaft, has at last succeeded, and our State entomologist leaves us pleasantly transformed from his previous fractional condition into a happy integer."

FAMINE is reported in Chihuahua, Mexico.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Results of Irrigation in Tulare County.

EDITORS PRESS:—Previous sketches from this part of San Joaquin valley have sought chiefly to give your readers some idea of the works completed or in course of construction, to irrigate our thirsty lands, and some of the general principles already evolved from these experiments. This will present a few details of the effects now produced in this favored region of Tulare county, together with other items more or less suggestive.

Four years and a half ago the writer of this sketch first passed through this country. Then settlers were just moving in, very few were here, and the general appearance was about what is seen in most of the uncultivated parts of San Joaquin valley to-day. Now

The Most Striking Differences

Are the large number of houses and barns, dotted here and there, scarcely a quarter section being without its family or some unfortunate bachelor who expects some day to have a family, and the general presence, even in mid-summer, of some green growth to cheer the eye in contrast to the usual dry, parched look of California plains and lower mountain ranges throughout the dry season. Near almost every house you see has more or less shade and fruit trees, green shrubs and cheering flowers; more or less garden vegetables, grape-vines and green corn, including maize, Egyptian and broom corn and millet; more or less alfalfa and melon vines, and, in the absence of such marks of culture, plenty of green sunflowers and "hog-weeds" from five to eight feet high, and the prickly "alkali weed" from three to six feet.

There at the thrifty, pleasant, quiet little town of Hanford, with its good-hearted people, as you look from your hotel window in the second story to the ranches around you, your eye falls on

A Varied and Pretty Rural Landscape, Some of which has been furnished with water for irrigation only about a year, while much of it has for three years. There are the spreading oaks and willows along the sloughs and King's river—old inhabitants they; numerous farm-houses in sight, with green patches of greater or less size around them, good sized alfalfa fields growing rankly at intervals, large stacks of wheat and barley looming up here and there in the yellow stubble fields, where the busy header and header wagons are at work. Far to the eastward, where there are no oaks in sight, groves of tall, green cottonwoods, Australian gums and Lombardy poplars indicate various ranch centers. None of this was seen four years ago, but a few scattered oaks and willows. Even the latter appear more thrifty than they did before the industry of the farmers brought out the abundant water of King's river into their ditches and sloughs. The background to this view is formed by the dense woods on the river immediately in front, by the towering and ever grand Sierras to the eastward, capped with snow, and to the westward by the Coast Range mountains. To the admirers of nature and life in the country, it is altogether a complete and charming picture. Near here I have seen for the first time several "timber claims," located under the excellent law requiring the cultivation of so many acres of trees. The gums, cottonwoods, locusts and other trees upon them are of all sizes up to 20 to 25 feet in height, and from a few inches to over two feet in circumference.

As a general rule,

The Wheat and Barley

Is as thick, tall and well-headed as any seen in the best grain regions of the valley, and is threshing out from 15 to 50 bushels per acre. In places where the moisture was greatest and the straw thickest, the "berry" is somewhat shrunk by rust. Where wheat land was made too wet, or was irrigated too late, much of the grain has "lodged." Indeed, in a few places, whole fields show the grain flat on the ground. But even in these places, the heads are plump, and the various "lifters," attached to the headers, take it up remarkably well, saving, as is estimated, about three-fourths of it.

One of the general effects of the large amount of irrigation here is that

The Atmosphere is Already Tempered

By the heavier growth, especially the green plants covering the ground, and the amount of moisture kept upon the surface. Consequently, winter weather is perceptibly milder, and the summers are not so hot as formerly. There is more moisture in the air, but not enough to make the summer heat sultry and prostrating, as it always is in a very damp climate. No one fact has been more gratifying generally, and somewhat unexpected, than that the people, with rare exceptions, enjoy as vigorous health, where proper drainage is attended to, as is the rule through our large valleys. Thickly settled as all this district is, we hear of scarcely any sickness, except from chronic diseases, originating elsewhere.

The Mode of Irrigating.

When the water has been conveyed to the land by the ditches already described, is to conduct it in smaller ditches through and around the

land to be irrigated. There, and in natural sloughs and sinks, it is kept standing until the soil for some distance around has been thoroughly soaked with it. When the soil is considered moist enough, the supply can be shut off at will.

An important problem has been, how to get the water out of natural channels? This question has been solved by the "regulators" already alluded to. These dam the water up to heights of from five to 14 feet. Side ditches are taken out to right and left above each regulator, and by having these at suitable intervals, the water is readily distributed to each tract entitled to it. The water held in deep ponds by these regulators also seeps to very considerable distances, and thoroughly irrigates adjacent lands. I have seen this illustrated lately by the water from a slough, half a mile north of town, seeping into cellars not more than five and seven feet deep. Indeed, cellars, unless well lined by hydraulic cement, and dug wells, are not at all suitable to an irrigated country. Many have considered it impossible to get the water out of Mussel slough; but,

By Means of Its Regulators,

The water is held so high in places, that where the grade in formerly made ditches, which were intended to carry the water towards Mussel slough, is only a foot or less per mile, the water from the slough being several feet above grade, has, when let into such ditches, flowed in the opposite direction. This leads to the humorous assertion, that "Manning is running the water up hill," though, in fact, it is merely backed up grade. As a result of the increased moisture of this soil, plowing and planting for second crops was going on during the month of July. Farmers were then putting in beans, corn and potatoes. The latter part of that month, Indian corn was found in every stage of advancement, from patches, where it was a few inches high, to 80-acre fields of it, standing from eight to 12 feet high in tassel and silk, with from two to five ears forming on each stalk. Roasting ears can be had here at almost all seasons of the year, as is true of most of the staple vegetables.

The changes wrought on some farms within four years and less is

Almost as if by Magic.

The places of Mr. Cotton, Mr. Farmer, Mr. Clark, Mr. Gallup, Judge Talbot, Mr. Parlin, Mr. Bloyd, Mr. Shore, Mr. Simpson, Dr. Moore, and others, which but a short time ago looked as dry and unattractive as any of our unirrigated plains, are now embowered in trees and vines.

Mention has already been made of the improvements on Major McQuiddy's ranch. On Mr. Maunig's place are some fine young grafted orange trees from Los Angeles. On one of them, about five years old and scarcely five feet high, I saw a number of young oranges. On Mr. Parlin's place, near Grangeville, are Lombardy poplars two years old of surprising growth. For example, one of them planted, as he tells me, a mere switch, two years ago last April, is now 23 inches in circumference near the ground, and some 25 feet high. This gentleman assures me of the following yield of sweet potatoes, Carolinas, on his land. From three single sets in three hills, the product was: From first hill 42 pounds, second hill 40 pounds, third hill 39 pounds, or in all 121 pounds. On this ranch is a bored well about 30 feet to water, the temperature of which is 60° Fahr. You rarely find well water so cold; its general range in San Joaquin valley being from 64° to 72°.

Alfalfa

Is here the standard pasture and hay plant, as it is rapidly becoming throughout the State. From four to six cuttings per year, with a yield of from one and a half to two tons at each cutting are common. On Perry Phillips' place, near Kingston, 250 head of hogs of all sizes, and 50 head of sheep have been kept in good condition for several months on about 10 acres. He does not even ring the noses of his hogs. Where the growth is rank he deems this unnecessary. He and others believe it is not best to keep stock on alfalfa alone as a constancy, but to change them occasionally upon wild feed. It is estimated here that four or five cows can be kept in good condition on every acre of alfalfa, and that about 3,000 sheep can be kept with safety on 160 acres of it after the second year's growth. I am informed that Mr. Haas finds his sheep, which formerly yielded five pounds of wool per head yearly, will average 12 pounds when fed on alfalfa. The profits on 160 acres of alfalfa for sheep are estimated at \$5,000 per annum on increase and wool. It is very safe to calculate on keeping 1,600 hogs on 160 acres of this clover. Experience proves that some care is necessary in feeding cows and sheep on alfalfa pastures. If kept awhile, where it has been eaten down closely, and then turned upon a rank growth of it to graze at will, they may eat too much and die from its effects. The regular salting of stock generally prevents this.

An item in

Grape Pruning on Irrigated Land,

Illustrated on Mr. James Pursell's place, seems to involve a correct principle. He trims his vines some four or five feet high, much the same way as in the vineyards along the Rhine. This is to keep the clusters of grapes some distance from the damp ground to protect them against mildew and decay. It certainly succeeds well on his vines, for they are wonderfully rich with grapes and blooms.

This is considered a fine region for cotton, and were that crop only profitable in California some would try it. But until a cotton factory,

using the "Clement attachment," which spins the lint from the seed-cotton without previous ginning, is established on or near King's river and run by water-power, cotton culture will never "pay" here.

It is among the encouraging facts developed in this irrigated country, that some of the loose sandy soil covered with "alkali weed" is the easiest and best to irrigate. This promises well for similar regions in San Joaquin valley, whenever they are supplied with water.

In view of the importance of this irrigation problem for a large part of California,

A Practical Suggestion

Has been made here that may be worth recording. It is this: That the Legislature offer one or more suitable prizes for, first, the best general plan for reclamation and irrigation for the State at large; second, the best general plan for drainage of the surplus water of floods; third, the best special plan for overcoming any local difficulties in irrigation. Awards to be made by a competent board of commissioners, composed of, say, the Governor, one or more State officers, besides three prominent and disinterested engineers, selected from abroad, if possible.

It is a matter of general interest that another canal, with a general width of 150 feet, will soon be commenced at a point higher up King's river than water has yet been taken. This will irrigate all the remaining land between King's river and Cross creek.

I must not close this letter without saying, in behalf of all the people along this branch line of railroad, that if the time for trains could be changed without any great trouble so as to make closer connection with trains to and from San Francisco, it would be a great accommodation and would be welcomed heartily. Coming from San Francisco to Hanford, Lemoore or Huron, you are detained at Goshen or Visalia 10 or 12 hours, and about the same on your return. Could the morning and evening trains only change directions, the difficulty would be removed. As it is, mails are from 24 to 29 hours between these stations and the city. With the change desired, the time would be about seven hours less each way.

J. W. A. W.

Tulare County, August 8th.

California Sumac.

EDITORS PRESS:—I received your favor of June 18th, with request to hear further on the culture and trade in California sumac. The long delay in answering your request is owing to the purpose had in view of commencing the leather business as now going into operation by the Anaheim Hide and Leather company. This company was recently organized with A. Guy Smith, president, B. F. Seibert, treasurer, I. Anderson, manager, and A. Shubert, secretary. The requisite improvements have been secured for the manufacture of light leather, such as calf, kip and sheep skins. The last named stock is to be tanned with California sumac alone, and from the practical working of this business, the real value of the tanning properties of our home sumac, in contrast with the Sicily imported article, may be fully determined.

About one year since, we sent samples of our native sumac to the Eastern cities of the Atlantic States, as also to San Francisco. These samples were very highly approved by the Morocco Manufacturers' Convention, held at Lynn, Mass., as published by the *Shoe and Leather Reporter*. The samples of sumac as gathered last June, were taken too early in the season to possess its best tanning properties.

Prof. Hilgard's test of the sumac, gathered in the month of August, is very favorably compared with the analysis of the Sicily sumac, and doubtless the planting and culture of our native sumac as practiced on the Mediterranean coast, would greatly improve its tanning properties.

We have samples sent in the leaf branches to our several consuls in Italy and Sicily, and in return have received like samples of the sumac we import. The appearance and taste is very similar. By the advice of one of our consuls most interested in our home productions, I will therefore order from his agency a good supply of the Sicily sumac seed for planting on the "new Italy" coast, that we may have, by its culture and trade, realize the benefit of this new home industry as strongly advocated by Mr. Kengan of New York, president of the Morocco Manufacturers' Association of our Eastern cities. The few statements as given on the sumac question, in this, my long delayed answer, are now offered that those most interested in the new California industry may be the better assured of its claims upon the people, and that the dry waste lands of Southern California may become very valuable to the owner thereof by the planting and preparation of the new sumac for the trade at large.

J. ANDERSON.

Anaheim, Los Angeles Co.

Santa Barbara County.

EDITORS PRESS:—Perhaps a line from "Little Nook" would be acceptable, as I have seen nothing from this vicinity in a long time. As the harvest of small grain and hay is about over, we can arrive at some conclusion as to the result. Wheat is almost an entire failure; cause, rust. Barley is injured considerably; the grain small and there is a short yield with

plenty of large, long straw. Hay is very plentiful, but the average quality is very poor. So you see the farmer so far has little to encourage or pay him for his labors.

We have a good prospect for corn and beans. The bright green of the broad acres of each are pleasant to look upon. Some plowed and planted their stubble and hay ground with beans, corn, potatoes, etc. So we have a little to fall back on where we suffer a failure in wheat and short crop of barley. Corn never appeared more promising at this time of year. There is some mildew on beans in places, but we look for a good crop.

Fruit is short all around as far as my observation goes. Grapes are nearly an entire failure from mildew. I never saw vines so badly used from that source before. Some of the apple trees are not growing as thriftily as we expected for what appeared so favorable a season. I think mildew the cause, as many of the leaves are mildewed considerably. There is no other reason that I can see, as the soil is in good condition and moist. Peach, nectarine and apricot trees are growing well, but have little fruit. We will look for a fine show next year.

The English walnut is doing well and many of the trees are bending with the weight of fruit. Some of the branches are resting on the ground like heavily laden apple trees. The almond is shy; but few trees are full, and many have none to speak of.

Potatoes are fair; not a heavy yield as yet. Most of the earlier were blighted somewhat. The late crop appears bright, and we hope it will escape the blight. Sweet potatoes will be in ample supply for home use and some for the market.

Taken altogether we have little or no reason to grumble, as we have a wide range of products and not all staked on wheat. Our soil and climate are not excelled. We can stand a little mildew or blight now and then.

It is no use to tell you that money is scarce, as it is so general that the complaint has become chronic. Some improvements are being made. The wharf at Santa Barbara has been rebuilt. Our wharf at Carpinteria is well under way, and looking substantial enough to stand Neptune's assaults on Pomona's retreat.

O. N. CADWELL.

Carpinteria, Cal.

HORTICULTURE.

The Santa Ana Apricots.

EDITORS PRESS:—The Press of Aug. 3d is at hand. There seems to be a wide difference of opinion between the fruit doctors. I do not think they have the correct name yet. Downing, I believe, is considered the leading authority on fruit, and he describes the peach apricot as having a perforated pit the same as the Moorpark. The variety I sent you had not commenced ripening July 1st; what we are cultivating for the peach apricot ripens August 1st. The Blenheim ripens here about the middle of July. It is a smaller apricot, dark yellow, stone smoother and darker color; that is, the variety I cultivate as Blenheim. I cannot say if it is correct or not. The Royal ripens here about the middle of July; Hemskirk about July 25th. I have not trees of the same age which I think might make some difference in the time of ripening.

Another point to be looked at is that there is about one month's difference in the time of fruit ripening between here and Sacramento; that is, the same variety is one month later here.

The variety I sent you is cultivated here as the Moorpark, Early Golden and Largo Early. It was shipped to me once as White apricots. I think B. S. Fox sent me some marked Early Golden. We have the apricot badly mixed in this section, and I hope we will be able to get them correct some time. I am budding a large quantity of this nameless variety, and hope to be able to find the correct name before selling time.

JOSEPH SEXTON.

Golcta, Santa Barbara Co., Cal.

THE APIARY.

Where to Locate an Apiary.—No. 2.

EDITORS PRESS:—In my last I began to speak of bee pasturage. I continue from that point.

After the alfalfa, or before it is gone, comes one kind of sage called the black sage here. It looks like the sage raised in gardens for cooking purposes. The foliage is dark green. It grows in sandy land and on side hills lying to the south. The blossom is a light blue and small. It lasts a long time. I consider it one of our best honey plants. The honey is light in color and very thin, when gathered. It takes about five days for the evaporation of water before the bees will cap it over.

Next comes the "balled" or "butter" sage, which is a good honey-producing plant, but short lived. It is the most common sage that grows in southern California, on the mountains and in the valleys, and, in fact, it is to be seen everywhere. The higher up the mountains the

shorter it grows and the later it blooms. The honey from it is about the same as from the black sage.

Next comes the "buck brush" or "mountain alfalfa," which lasts a long time. It grows on heavy clay land mostly, and is a fine brush, very heavy with foliage and bloom. It has a yellow flower, and, I think, fully 60% of our good honey comes from this plant. In fact, it is in bloom as long as any of our honey-producing plants; our far-famed white sage honey is mostly made from it.

White sage comes next in order. It is a good honey plant, but bees do not work on it as long as there is anything else for them. The honey is very thick, heavy and white, and does not need capping by the bees to insure its keeping after extracting, as does all other honey. I shall speak more of this point after a while. The white sage begins to bloom in April and continues until the middle of August. Good honey came in just 100 days this season.

There is one more plant which I should mention, called by Harbison "wild buckwheat." It grows all over, in rocky cliffs, on mountains, in river beds and sand. I never saw it so plenty as it is this year. It has a flower as large as a clover head, to see it a distance, but when examined close, the ball, for such it is, is made up of minute white flowers, hundreds being in a bunch no larger than a red clover blossom. The honey is white and very nice. There are other good honey-producing flowers and shrubs, of which I will not speak now. All go to make up the honey season. It seems as if governed by nature, so that when there are the greatest number of bees, then there is the most honey.

HYBRID.

Ventura County.

[To be Continued.]

ARBORICULTURE.

The Atlantic and Pacific Forests.—No. 1.

[By PROF. ASA GRAY.]

On April 18th, 1878, after his visit to this coast, the well known botanist, Prof. Asa Gray, delivered a lecture before the Harvard University Natural History Society, on "Forest Geography and Archeology," which consisted in the main, of the meteorological conditions which prevail on the Atlantic and Pacific slopes of this country, and a comparison of the forests indigenous upon them. The subject is of such general interest and the writer of such high repute, that we shall present the lecture in full in a series of articles as our space permits. For the ability to do this, we are indebted to the *American Journal of Science and Arts*:

It is the forests of the Northern temperate zone which we are to traverse. After taking some notes of them in their present condition and relations, we may inquire into their pedigree, and from a consideration of what and where the component trees have been in days of old, derive some probable explanation of peculiarities which otherwise seem inexplicable and strange.

In speaking of our forests in their present condition, I mean not exactly as they are to-day, but as they were before civilized man had materially interfered with them. In the district we inhabit, such interference is so recent that we have little difficulty in conceiving the condition which here prevailed, a few generations ago, when the "forest primeval," described in the first lines of a familiar poem, covered essentially the whole country, from the Gulf of St. Lawrence and Canada to Florida and Texas, from the Atlantic to beyond the Mississippi. This, our Atlantic forest, is one of the largest and almost the richest of the temperate forests of the world. That is, it comprises a greater diversity of species than any other, except one.

In crossing the country from the Atlantic westward, we leave the forest behind us when we pass the western borders of those organized States which lie along the right bank of the Mississippi. We exchange it for prairies and open plains, wooded only along the water-courses; plains which grow more and more bare and less green as we proceed westward, with only some scattering cottonwoods (*i. e.*, *poplars*) on the immediate banks of the traversing rivers, which are themselves far between.

In the Rocky mountains we come again to forests, but only in narrow lines or patches; and if you travel by the Pacific railroad, you hardly come to any. The eastern and the interior desert plains meet along the comparatively low level of the divide which here is so opportune for the railway; but both north and south of this line the mountains themselves are fairly wooded. Beyond, through all the wide interior basin, and also north and south of it, the numerous mountain chains seem to be as bare as the alkaline plains they traverse, mostly north and south, and the plains bear nothing taller than sagebrush. But those who reach and climb these mountains find that their ravines and higher recesses nourish no small amount of timber, though the trees themselves are mostly small and always low.

When the western rim of this great basin is reached there is no abrupt change of scene. This rim is formed of the Sierra Nevada. Even its eastern slopes are forest-clad in great measure, while the western bear in some re-

spects the noblest and most remarkable forest in the world; remarkable even for the number of species of evergreen trees occupying a comparatively narrow area, but especially for their wonderful development in size and altitude. Whatever may be claimed for individual eucalyptus trees in certain sheltered ravines of the southern part of Australia, it is probable that there is no forest to be compared for grandeur with that which stretches, essentially unbroken, though often narrowed and nowhere very wide, from the southern part of the Sierra Nevada in lat. 36° to Puget sound beyond lat. 49°, and not a little farther.

Descending into the long valley of California, the forest changes, dwindles and mainly disappears. In the Pacific Coast Ranges it resumes its sway, with altered features, some of them not less magnificent and of greater beauty. The redwoods of the coast, for instance, are little less gigantic than the big trees of the Sierra Nevada, and far handsomer and a thousand times more numerous, and several species which are merely or mainly shrubs in the drier Sierra, become lordly trees in the moister air of the northerly coast ranges. Through most of California these two Pacific forests are separate. In the northern part of the State they join and form one rich woodland belt, skirting the Pacific, backed by the Cascade mountains and extending through British Columbia into our Alaska territory.

So we have two forest regions in North America, an Atlantic and a Pacific. They may take these names, for they are dependent upon the oceans which they respectively border. Also we have an intermediate isolated region or isolated lines of forest, flanked on both sides by bare and arid plains; plains which on the eastern side may partly be called prairies, on the western, deserts.

This mid-region mountain forest is intersected by a transverse belt of arid and alkaline plateau, or eastward of grassy plain, 100 miles wide from north to south, through which passes the Union Pacific railroad. This divides the Rocky mountain forest into a southern and a northern portion. The southern is completely isolated. The northern, in a cooler and less arid region, is larger, broader, more diffused. Trending westward, on and beyond the northern boundary of the United States, it approaches and here and there unites with the Pacific forest. Eastward, in northern British territory, it makes a narrow junction with northwestward prolongations of the broad Atlantic forest.

So much for these forests as a whole, their position, their limits. Before we glance at their distinguishing features and component trees, I should here answer the question, why they occupy the position they do; why so curtailed and separated at the south, so much more diffused at the north, but still so strongly divided into eastern and western? Yet I must not consume time with the rudiments of physical geography and meteorology. It goes without saying that trees are nourished by moisture. They starve with dryness and they starve with cold. A tree is a sensitive thing. With its great spread of foliage, its vast amount of surface which cannot diminish or change, except by losing that whereby it lives, it is completely and helplessly exposed to every atmospheric change, or at least its resources for adaptation are very limited, and it cannot flee for shelter. But trees are social, and their gregarious habits give a certain mutual support. A tree by itself is doomed, where a forest, once established, is comparatively secure.

Trees vary as widely as do other plants in their constitution, but none can withstand a certain amount of cold and other exposure, nor make head against a certain shortness of summer. Our high northern regions are therefore treeless, and so are the summits of high mountains in lower latitudes. As we ascend them we walk at first under spruces and fir trees or birches. At 6,000 feet on the White mountains of New Hampshire, at 11,000 or 12,000 feet on the Colorado Rocky mountains, we walk through or upon them; sometimes upon dwarfed and depressed individuals of the same species that made the canopy below. These depressed trees retain their hold on life only in virtue of being covered all winter by snow. At still higher altitudes the species are wholly different; and for the most part these humble alpine plants of our temperate zone, which we cannot call trees, because they are only a foot or two or a span or two high, are the same as those of the Arctic zone, of northern Labrador, and of Greenland. The Arctic and the Alpine regions are equally unwooded from coal.

As the opposite extreme, under opposite conditions, look to equatorial America, on the Atlantic side, for the widest and most luxuriant forest tract in the world, where winter is unknown and a shower of rain falls almost every afternoon. The size of the Amazon and Orinoco, brimming throughout the year, testifies to the abundance of rain and its equable distribution.

The other side of the Andes, mostly farther south, shows the absolute contrast, in the want of rain and absence of forest; happily it is a narrow tract. The same is true of great tracts either side of the equatorial regions, the only district where great deserts reach the ocean.

It is also true of great continental interiors out of the equatorial belt, except where cloud-compelling mountain chains coerce a certain deposition of moisture from air which could give none to the heated plains below. So the broad interior of our country is forestless from dryness in our latitude, as the high northern zone is forestless from cold.

Regions with distributed rain are naturally forest-clad. Regions with scanty rain, and at one season, are forestless or sparsely wooded, except they have some favorable compensations. Rainless regions are desert.

The Atlantic United States in the zone of variable weather and distributed rains, and the Gulf of Mexico as a caldron for brewing rain, and no continental expanse between that great caldron and the Pacific, crossed by a prevalent southwest wind in summer, is greatly favored for summer as well as winter rain.

And so this forest region of ours, with annual rainfall of 50 inches on the Lower Mississippi, 52 inches in all the country east of it bordering the Gulf of Mexico, 45 to 41 in all the proper Atlantic district from East Florida to Maine, and the whole region drained by the Ohio, diminished only to 34 inches on the whole Upper Mississippi and Great Lake region, with this amount of rain, fairly distributed over the year, and the greater part not in the winter, our forest is well accounted for.

The narrow district occupied by the Pacific forest has a much more unequal rainfall, more unequal in its different parts, most unequal in the different seasons of the year, very different in the same place in different years.

[To be Continued.]

THE DAIRY.

Cost of Fitting up a Cheese Factory.

EDITORS PRESS:—Will some of your readers inform the subscriber through the RURAL PRESS what the apparatus for a first-class cheese factory will cost, say for 400 or 500 cows?—W. A. S., San Jose.

EDITORS PRESS:—Complying with your request that I should answer your correspondent from San Jose with regard to cost of apparatus for a cheese factory of from 400 to 500 cows, I have hastily prepared a schedule of same, taking 500 cows as the supposed number. I have recently fitted out a factory for about that number of cows, the cost of which forms the basis of the figures I give. The following I think will be found reliable. It will be observed that in my list no provision has been made for engine or force pump for forcing water into tanks, which in some localities may be necessary. It will be found much more desirable to have running water, either from spring or artesian well, where it can be procured without too great expense, as it will materially lessen the running expenses of the factory as well as prove at all times a safeguard from tainted or sour milk, both of which are very liable to occur where there is a lack of good, pure running water. There are also cases of defect sometimes in the working of either pump or engine, and this causes much inconvenience, and many times to actual loss in handling the milk. The following is a list of necessary apparatus with present cost of each item:

Apparatus for 500-Cow Factory.	
Three 600-gallon vats, \$80 each.....	\$240.00
One press with capacity for 30 60-pound cheese.....	25.00
Ten press screws.....	70.00
Thirty telescope hoops.....	90.00
One 80-gallon weighing can.....	15.00
One milk conductor.....	5.00
One curd sink with perforated bottom.....	20.00
One 6-horse-power boiler with injector and pipes complete to connect with vats.....	275.00
Two handagers or curd fillers.....	5.00
Two curd knives, one horizontal and one perpendicular.....	15.00
One pair of scales, 900 pounds capacity.....	45.00
One pair of scales for weighing salt, etc.....	10.00
Two rennet jars.....	5.00
Two jars for coloring.....	2.50
One curd mill.....	30.00
One sink for washing and scalding dairy fixtures.....	10.00
One set of testing instruments.....	5.00
Pails, dippers, curd scoop, etc.....	6.00
Total.....	\$873.50

Gilroy, Cal.

E. A. DAVISON.

A MILK-HOUSE IN AMADOR CO.—The coolest and best milk-house and cellar, one of the most complete in all its appointments that we have ever seen, is in Volcano, Amador county, in the rear of Mrs. Reed's boarding house. It is a cave or natural excavation in a limestone rock. The cave is large and high, with a spring of cold water gushing out at one side of the apartment. The rock is about 75 feet high and covers two acres.

THE SWINE YARD.

Official Investigation of Hog Cholera.

An Illinois paper says provision was made by the last Congress for the purpose of investigating the origin and devising a remedy for hog cholera. The sum of \$10,000 was appropriated for the purpose, to be expended under direction of the Commissioner of Agriculture. The Commissioner at once proceeded to carry out the provisions of the appropriation act, and has decided to appoint eight examiners to make investigations, each in a particular section of the country, and the following gentlemen have been selected for the duty: Prof. Law, of Ithaca, N. Y.; Prof. H. J. Detmar, Chicago; Dr. R. F. Dyer, Ottawa, Ill.; Dr. D. U. Voyles, New Albany, Ind.; Dr. Albert Dunlap, Iowa City, Iowa; Dr. Hines, Kansas; and Dr. Solomon, Asheville, N. C. The gentlemen are well known scientists and physicians of experience and standing. The selection for Missouri has not yet been decided upon. These examiners are

to receive \$200 a month for their services and reasonable traveling expenses, and are expected to complete their work in two months. When their reports are received they will be submitted to the best scientific talent to be procured with a view to devising a remedy for the disease. The estimates made from returns received at the Agricultural Department from correspondents in all the counties in the United States show that the annual loss to stock-growers in the country from the various diseases which are fatal to swine aggregates more than \$10,000,000. The States which suffer to the greatest extent are Illinois, Indiana, Iowa and Missouri; the reported annual loss in each of them being about \$1,500,000.

Deep Water in Carquinez Straits.

The Antioch *Ledger* of last week gives an account of a survey of Carquinez strait, just made by Gen. B. S. Alexander of the Coast Survey, showing that the north channel of Carquinez strait has been deepened seven feet. The following is the statement in the *Ledger*: In 1874, when Capt. Plummer, brought his ship *El Dorado* to Antioch to load with wheat for Liverpool, the Oakland, Vallejo and Martinez papers said there was not sufficient depth of water for the vessel to return. They were no doubt honest in publishing this erroneous statement, as the Coast Survey chart showed that at two points, namely, opposite Seal island and near Brown's island, below Antioch, there was but 14 and 17 feet of water at low tide; hence it was thought to be imprudent for owners to risk their ships in passing heavily laden, across these shoal points. The survey from which these figures were taken was made in 1867. A sounding of the channel in 1874, however, disclosed the fact that the channel had deepened and the result was that Capt. Plummer was convinced he could go to sea from here with a full cargo. It being the first attempt, however, the underwriters desired him to complete the cargo at San Francisco, which was done. From 1874 to the present time no vessels have been loaded at our wharves.

During the present week Gen. B. S. Alexander, Chief of the Coast Survey, has made a thorough sounding of the channel from the Straits of Carquinez to Antioch and with the most favorable results. Gen. Williams gratuitously offered the use of his steam launch *Lulu*, and a party consisting of Gen. Alexander, Capt. E. C. Boobar, Warren Bryant, of San Francisco, and Capt. John Turner, J. G. Chase, J. P. Abbott, F. S. McNulty, T. O. Carter, Capt. Geo. Graham, Louis Dahnken and Engineer McDermott, of Antioch, spent Sunday and Monday in sounding the channel. The supposed point of difficulty was in the vicinity of Seal island. At this point there are three channels, known as the South, Middle and North channels. The former, the South, is laid down as the ships channel. On Sunday, soundings were made through the South channel, but only 17 feet of water was found at low tide, which was not a satisfactory showing. The party continued on to Antioch, sounding the entire distance and found not less than 24 feet of water at any point, reckoning at low tide.

On Monday the party returned, throwing the lead from Antioch to the Sacramento river, following the Sherman Island or North channel, which showed from 26 to 40 feet of water. Gen. Alexander expressed the belief that the North channel off Seal island would prove to be deeper than the South channel sounded the day previous, and so it resulted. Where the chart of 1867 showed 14 feet of water at low tide the soundings Monday showed 22 feet, which was the shallowest water found between Benicia and Antioch. This survey proves that during the last 11 years the North channel has deepened seven feet, and also establishes the fact that any vessel afloat can with safety come to Antioch. There is from five to seven feet of tide at the point mentioned, which added to 22 feet would give 27 and 29 feet of water at the point where it has been supposed was the great danger of ships being grounded. Gen. Alexander expressed himself as highly gratified to know that the North channel has deepened, and says that there is to-day a better ship's channel from the Straits of Carquinez to Antioch than that of San Pablo bay.

AWARDS TO AMERICANS AT PARIS.—A dispatch from Paris says that nearly all class juries of the exhibition have finished their work and submitted their reports to the group juries. The latter have passed upon the reports thus far presented, making very few changes. Nothing is officially known of the result, but it is unofficially stated that the Americans have obtained more prizes than the citizens of any other country, in proportion to the number of exhibitors. In one class all American exhibitors have obtained medals, and in another all except one. It is thought the United States will have five or six grand prizes, and a liberal number of gold medals. The foreign jurors have expressed much admiration for the excellence of the articles in the American section of the exhibition. The general commission has increased the number of gold medals 20%, silver medals 40%, and bronze medals 60%.

WATERPROOF GLUE.—Fine shreds of India-rubber dissolved in warm copal varnish make a waterproof cement for wood and leather.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Worthy State Lecturer's Appointments.

Name of Grange.	County.	Time.
Cahto.....	Mendocino.....	Tuesday, August 27th
Potter Valley.....	Mendocino.....	Thursday August 29th
Lakeport.....	Lake.....	Saturday, August 31st
Cloverdale.....	Sonoma.....	Monday, September 2d
Healdsburg.....	Sonoma.....	Tuesday, September 3d

In Memoriam.

WOODBRIDGE GRANGE, No 84, San Joaquin Co., July, 1878.

WHEREAS, It has pleased an all-wise Providence to suddenly remove by death from our midst a Charter member of this Grange, and much-respected sister, Rachel Gillingham,

Resolved, That while we bow with humble submission to the will of our Heavenly Master above, we cannot but mourn the loss to society of an estimable lady, to our Order a worthy and consistent member, to the family a devoted wife and loving mother.

Resolved, That we tender to our worthy Bro. Gillingham and family the heartfelt sympathy of every member of the Grange, in this their hour of sad bereavement and affliction, with the lines:

Long was that household as a bond unbroken,
Father, mother, children, all were there.
And Death drew near and gave the mystic token!
In vain their bitter tears, or agonizing prayers,
In vain the loving care, the tireless waking,
The hands that failed not though their hearts were breaking!

Death in the household! Gone the loving mother
Whose care had guarded them in childhood's hour.
Folded the hands, at last, in sleep that never
Shall wake in feverish pain. Love hath no power
To move her now, so sweetly she is sleeping—
Resting from all life's pain, and care, and weeping.

We cannot wish our loved one back to languish
In pain, when Death has given sweet relief.
But oh! our lonely hearts are filled with anguish,
We miss her so! How can we check our grief,
To see her face here no more forever?
Alas! that Death such tender bonds must sever!

Though dead, yet living! Every memory tender
Of kindly counsel, words of loving care,
Bring back the scenes you so well remember—
Your hearts shall hold them fixed forever there.
Death took her from you! but love is immortal,
And reaches to her beyond Death's portal.

Resolved, That in respect for her our Charter be draped in mourning for thirty days, and a copy of these resolutions be given the family of deceased, and to the *California Patron* and *RURAL PRESS*, for publication.—James D. Huffman, Ezra Fiske, Sister L. M. McIntosh, Committee.

STOCKTON GRANGE, August 10th, 1878.

The following resolutions of respect to the memory of Mrs. E. Voorhees, who was recently thrown from a carriage and killed while driving to Stockton:

WHEREAS, It has pleased our Divine Master to remove from our Grange circle, our worthy Sister, be it

Resolved, That we recognize in the separation, the loss of a friend and sister, and a faithful worker in our Order.

Resolved, That we extend to our bereaved brother and family our heartfelt sympathy for this sudden and unexpected loss, and may they bow in meek submission to Him who doeth all things well.

Resolved, That this sincere expression of the members of this Grange be placed upon our records, and a copy be sent to our bereaved brother, and to the *RURAL PRESS*, *California Patron*, *Stockton Independent* and *Herald* for publication.—Sister W. B. West, C. E. Oberhiser, L. B. Boody.

INTO A NEW HALL.—Temescal Grange will meet Saturday, September 1st, at 2 P. M., in the new hall in Cameron's block, 14th street, near Broadway, Oakland. This will be a great improvement on the old place of meeting. Important business is to come before the meeting, and a full attendance of all members is desired.

Henry Ward Beecher.

This famous clergyman has come to our State to deliver lectures at different points and perhaps to regale himself with a brief experience of California air and scenery. We doubt not he will prove an enthusiastic admirer of our coast, because few men are more gifted than he with an appreciation of the beautiful in nature. Mr. Beecher is too well known throughout the country to require extended description or biographical notice from us. We present his portrait as that of one of the most famous men of the day. Judging from the rush which has been made for the tickets to his lectures in this city, the people must be glad to see him. His lectures will be given in this city August 22d and 23d, 29th and 30th.

PREFERS THE RURAL PRESS.—T. J. Della, Arcata, Humboldt county, Cal., writes: "Out of four agricultural journals that I am now taking, I prefer the RURAL PRESS."

Opening of the Mechanics' Fair.

We give below the addresses of Irving M. Scott, President of the Mechanics' Institute, at the opening exercises of the Thirteenth Industrial Exhibition, August 13th. Also the oration of J. W. Winans, Esq., on the same occasion.

ADDRESS OF IRVING M. SCOTT:

Ladies and Gentlemen:—On opening the Thirteenth Industrial Exhibition, we resume the story of mechanical advancement, and meet to review the progress of the past year.

The story is replete with the incidents of successful encroachment upon the domain of the unknown. A numerous and persistent army of explorers have invaded the shadow realms, and forced the heavens to yield part of their secrets; and burrowing amid the inner recesses of the earth, have laid bare facts and conditions, which enables the scientist to resolve from the domain of thought, laws and principles heretofore unknown.

No year passes without extending the knowledge of mechanical principles, and obtaining new victories over the forces of nature, making possible the improbable. And the shadows of the past become the tangible realities of the present. Inventions and improvements take a step forward, during periods of financial and commercial prostration, universal depression releases from the iron grip of business drudgery brains and fingers, whose cunning takes from the field of speculation, and harnesses to the practical the subtle elements of the universe.

The past 12 months has been the opening of

mon purpose. For they will take this discipline with them into the council chambers, and prove that the strength of the Republic rests with the producers.

The civilization of this coast has done but little towards providing suitable amusements for the people; the theater on one hand, the saloon on the other, or worse, is all that this community offers to the young. These industrial exhibits supply the one great want of our social system; where amply arranged and sheltered from the cold, industry brings her trophies, science her laws, art her progress, and, blending in one harmonious whole, invites your attention, and promises to interest, to instruct and to amuse you.

With these hopes and an abiding faith in the future, the Trustees decided to hold the Thirteenth Industrial Exhibition. The space applied for and occupied, the sale of tickets, the generous contributions in every department, promise a successful issue. The Board of Managers are pledged to the most rigid economy. All partisan feelings and differences have been settled in favor of the best interests of the Institute. Peace, order, harmony, law and energy have joined hands and are pushing forward the good work. And, with the support of the public, there is no such word as fail.

ADDRESS OF J. W. WINANS:

Gentlemen of the Mechanics' Institute: It is a source of mingled pride and gratulation to this fair city, which sits enthroned upon the margin of the Occident, that an institution so beneficent as yours has grown up in her midst into such a magnitude of usefulness and power. What more exalted object can we desire to contem-

modern applications of skilled labor can construct an Appian Way; no nice artificer can fashion an Etruscan vase. Anon, when the shadows of the mediæval era had dispersed, and that long, starless night had ended in the dawn of art revival, the wood engraving of Durer and the superb devices of Cellini, attained to such perfection as no later skill could rival. Yet the glory of the present age lies not in the pre-eminence which human genius can achieve or has achieved in isolated cases, but in the generalization and diffusion which a common desire for the cultivation, not less than the extension of the mechanics' arts, and the promiscuous pursuit of those high objects, have established among the masses of mankind. It was a world of theory, that ancient world, but this modern is a world of practice.

The Necessity of Daily Toil.

In that earlier day the alternative of human labor was not the price of human life; but now necessity prompts man to toil, and "necessity is the mother of invention." Yet though this originates in man's primal need for food and raiment, it end not there. With the attainment of what is absolute for the support of life comes that "auri sacra fames," the inexorable greed of gain. Impelled by this, as a fresh and still more powerful incentive, the mind is constantly alive to plan, the hand to execute, those almost infinite contrivances which science and invention bring to light, and labor consummates, for the aggrandizement of the contriver, the comfort and enjoyment of the race. Hence railroads span the continents and telegraph structures stretch through air and ocean until the very ends of earth are brought together, and the varied nations of the globe are growing homogeneous by fusion. Hence the machinery of iron and the artillery of steam are superseding with their swift results the slow and labored processes of manual employment. Hence new conceptions, new discoveries, clutching within their comprehensive grasp the little and the large, are modifying all our lives and changing the very conditions of our being. Alas! that learning and philosophy, and the devotion of the mind to literary themes, should be so grudgingly thrust aside by the spirit of utilitarianism as it rushes onward in its stern career. And ever, as the age swings on, the abstract hardens into the concrete. Over crumbling theories and broken speculations, over the ruins of metaphysical inquiry, over the reveries of the dreamer and the wrecks of the imagination, drives the car of progress. Yet we rejoice in our era, and expatiate admiringly upon the world's advancement.

"We are gods by our own reckoning and may well shut up the temples.
And wield on, amid the incense steam, the thunder of our cars,
For we throw out acclamations of self thinking, self-admiring.
With, at every mile run faster—O, the wondrous, wondrous age!
Little thinking if we work our soul as nobly as our iron,
Or if angels will commend us at the goal of pilgrimage,
Why, what is this patient entrance into Nature's deep resources?
But the child's most gradual learning to walk upright without bane?
When we drive out, from the cloud of steam, majestic white horses,
Are we greater than the first men who led black ones by the mane?"

Strange Mental Mutations.

Enecladus, nerved by a renovated strength, renews his struggles, thrilling the nations with his smoke and flame. Can you forbear to note what strange mutations the prevailing tendencies are working in the operations of the mind? There is less heed of the infinite in the more engrossing contemplation of the finite. Thought is busied with research into those means whereby the material elements can be converted into increased facilities for aiding humanity in its pursuit of luxury and ease. The highest good for the greatest number is no longer a mere political maxim; it seeks to subject the whole realm of nature to the wants of man. Side by side with the heroes of the world no less exalted in its annals, side by side with the great and giant intellects, and the famous men of every age, stands the noble army of inventors, as hallowed in the popular regard as the noble army of martyrs.

It is not my purpose, nor is the time congenial, to discuss the subject of mechanics, or the mechanical arts, in learned and didactic disquisition. I have only to commend a topic which, through your expository display, reveals its character and teaches its lessons by examples. Here, at this periodic and imposing demonstration, this carnival of labor, examples multiply on every side. The click of the needle, the rumble of the wheel, and the sonorous din of the machinery, all speak their usefulness "with most miraculous organs," and tell us what results they are achieving for the welfare of the people in terms more forcible than scientific dissertation, in commendations more sincere than verbal eulogy, in tones more eloquent than rhetorical harangues. This life abounds in instances where the voices of Nature, and of Art, discourse a language more significant than speech. I can only point to your strenuous efforts in the past and urge you forward in your noble work by hortatory words which, though they glow but feebly on the lips, are prompted by the heart.

Relationship between Utility and Beauty.

As we wander through the spacious halls and labyrinthine avenues of that huge Pantheon of art which you have reared—as we listen to the clangor of its instruments of brass and the music that reverberates from its grand choir of



REV HENRY WARD BEECHER, OF BROOKLYN, N. Y.

a new book, and a startled world is looking down a new vista, through the gates ajar, unlocked by the discoveries of Edison. The enlarged knowledge of the science of sound has swept the telegraph with its embroils, doubly-written, faulty messages aside, and substituted the telephone. Will the phonograph of the future be a substitute for failing eyesight? Will the megaphone quicken the dulled organs of hearing? Shall the choicest gems of literature be transmitted through the medium of mechanism.

In the future of mechanical science the intonations of the voice will be transmitted. The blind shall see, and the deaf hear!

Looking back at what mechanic art has been, knowing what she is now, and seeing all the professions, her willing handmaids, bringing their laurels to her feet; and from this standpoint looking forward and upward to the future, the constructing engineer is the Colossus in the coming time.

The machinery of transportation and its twin sister, the telegraph, have destroyed the old conditions of supply and demand. And from the old order of keeping a supply on hand, we pass to the new order of manufacturing on demand. This transition has for a time disturbed the financial, commercial, political and social conditions; and it has been a year of adjustment. The relations of the mechanical classes to the governing classes are undergoing a change, which, when consummated, will prove the wisdom of a system, in which the humblest citizen shares with the highest the duties of government.

The nation's interests will be safe with the mechanics, who have been taught to take the crude materials and shape them into a harmonious whole. Taught to construct, taught to build up, taught to accomplish; trained to direct their energies in one direction for a com-

plate than a Mechanics' Institute, which seeks, by the force of combination and co-operative union, with patient, persevering and unselfish effort, to promote the welfare of the great industrial mass, to cherish art, to foster manufactures—to crown labor king? For a brief interval the community has abandoned the mart and the exchange—the brain has ceased to pulsate and the hand to toil in the pursuit of gain—that here, within these halls, the people may meditate upon your civic triumphs, and exult in the achievements which your zeal and enterprise have wrought. The field in which you labor, although exhaustless, is not new or unexplored.

Discovery and Development of Art.

Beforetime, in the earliest annals of our race, while yet the world was young, the energies of man were concentrated on the discovery and the development of art. Not art alone in the loftier and more sublimated types of its ideal beauty, but universal art, including those more practical and useful forms, wherein it manifested all the skill and cunning of the craftsman's hand. If Praxiteles could summon from the marble, and Zeusis from the canvas, the grandest creations of the sculptor's and the painter's art, the genius of Daedalus was no less potently impressed on the rare mechanisms he contrived. The Seven Wonders of the World, those miracles of human power, still hold an undisputed sway over the works of each succeeding age. Nor do these grand examples stand alone. The might, the ingenuity, the skill of man, were no less prominent in the perfection which the useful arts attained. Many of these, although of world-wide notoriety and use, have been entirely lost. In vain do we strive to reproduce or rival the Tyrian purple or the Corinthian brass. The inscrutable texture of the ancient coins of bronze defies our craftiest attempts at imitation. No

iron voices; as we gaze up on the gorgeous panorama which these gathered works of art display in their variety, magnificence and beauty; as we stray through the gardens, teeming with fruit and flowers, luxurious with the foliage and growth of every clime; as we behold the costliest and rarest products of the loom, the multiplied creations of machinery, the strange and subtle emanations of inventive skill; as we survey the chambers quaintly ornamented with the garniture and decorations of the Gothic Age, the age of the Renaissance, the ages of the Louis, and the showy reproductions of Versailles; as we contemplate the gallery whose walls are studded with the delineations of pencil and brush, as we linger near the plash of fountains, or move amid the gay and brilliant throng that congregate around us in the festive spirit of the time, we realize in that seeming Palace of Aladdin, lit with its thousand lamps and glittering with mechanical splendors, how close is the relationship between utility and beauty; how intimately the capacity and love of man for labor, and its infinite creations, have identified themselves with his esthetic nature.

California is a marvel to the nations, alike from her material formation and the suddenness with which she sprung into the ranks of empires. Between her cloud-capped mountain ramparts on the east, and that vast ocean, whose surges lash her western strand, she lies, in her sweet isolation, a world within herself, secluded from the world without. Far and wide, throughout her spacious confines, the mineral and vegetable kingdoms have developed their most opulent resources. No other single State or realm upon the globe displays the wealth of nature in such countless forms or such abundance and perfection. To gather from each portion of her wide domain, from her vine-clad hills and fruitful valleys, her copious productions, diversified by the variance of her latitudes and climates; to collect from everywhere within her borders the rarest fabrications of the artisan and craftsman, and present them in a sparkling mass upon these annual occasions, inspiring thus the zeal of emulation by the contagion of example, and bringing the whole people into a consciousness of the extent of these resources, is but the beginning of your work. Yours is a broader empire and a loftier ambition. By systematic combination and properly directed effort, it is your purpose to increase the demand for labor while multiplying its results; to elevate the condition, extend the usefulness, promote the prosperity of the producing classes. Organization is power. In stimulating industry, not merely through the premiums which you bestow upon successful competition, but through the richer rewards that spring from the uterity and patronage which industry acquires by your exertions, you augment production. Increase of production generates extension of demand.

Sustaining the Rights of Labor.

In sustaining the rights of labor you give new courage to its faltering steps, new hopes to its desponding spirit. You lift it up to a closer equality with capital. You banish alike the arrogance of the consumer and the humility of the producer, so that the invidious and class distinctions of society are swept away, and the whole community, except where ignorance or vice creates depressions, is brought to stand upon a common platform. Well may the millions toil when roused to such a manly pride, when lifted to such lofty aspirations, when opened to such channels of success as your organization is creating. Even among the lowest ranks of men, these valued influences, while they ameliorate the condition, cultivate the moral sense and excite a thirst for knowledge. No stress of adverse fortune can force that man who clings unto his self-respect from realizing for himself and for his children the benefits of education. In the furtherance of this great principle you have collected on your shelves a library which you are constantly augmenting, and which, for rarity, extent and value, has no superior perhaps, save one, on the Pacific coast.

We come to-day to offer our homage at your consecrated altar. Your institution, prevailing over all the discouragements and obstacles which attended its creation—those influences which have crushed so many noble enterprises—has passed from the trials into the triumphs of time, and eventuated in a permanence of prosperity and power. Like Hercules struggling with the serpent in his cradle, you bore yourselves manfully, even in the very outset of your being; like him you have accomplished your 12 labors—those great industrial exhibitions which you have annually consummated during 12 revolving years. In this Institute, which has loomed up into such distinguished prominence and grand proportion, you have reared for yourselves a memorial more enduring than a monument of brass. Though the sword of the conqueror may fascinate and dazzle, yet it shines ever with a lurid and baleful gleam. Your honors are gathered from the plaudits of the people as the reward of earnest and successful effort, and, like the sunshine, they enliven while they glow. Flinch not, nor falter in your high resolve, but remain forever faithful to your trust, and let that venerated maxim, which the centuries have made immortal, "Improbis labor omnia vincit," be graven in flaming characters upon your shield.

AUSTIN, Nevada, was devastated by a cloud-burst August 15th. Loss will approximate \$100,000.

THE agriculturalists of New South Wales are jubilant over their prospects.

AGRICULTURAL NOTES.

California.

BUTTE.

GRAIN.—Judge O. C. Pratt informs the *Record Union*, that the yield of grain in his section along the river will not be one-third of that expected in the early part of the season. Where formerly the harvest brought in 500,000 bushels the yield will not exceed 150,000 bushels. He attributes this falling off to the fact that the season was too wet. There was much rank growth, much wild oat growth and much cheat. What grain is cut, however, he says is of good quality. Some of the fields never yielded better; other were total failures.

COLUSA.

BARN AND STACK BURNERS.—*Sun*, Aug. 10: Talking the other day with E. McDaniel, of Union, he suggested an organization of farmers who would offer a reward of at least \$1000 for every man convicted of setting fire to the grain on the premises of any member of the organization. He proposes that they shall agree to pay pro rata according to the number of acres in grain. If 200 farmers should join such an organization, the average figure for each one would be but \$5. There is hardly a farmer in the county but would be willing to give \$5 to have any man punished who had put fire to a grain field. But instead of 200, there ought to be 400 farmers join in such an organization. It would be apt to induce people disposed to incendiarism to give this county a wide berth.

MARIN.

OUR DISTRICT FAIR.—*Journal*, Aug. 17: The twelfth annual meeting of our District Agricultural Society, will commence on Monday, September 23d, and continue throughout the week. The signs are favorable to a very successful fair. Mr. Lippitt tells us that an art gallery, 20x80 feet, will be built before the exhibition opens, giving a better opportunity for the display of pictures and fancy work than ever before. A number of other special premiums have already been offered. We hope there will be exhibits of butter this year, and that the prize money for our staple will not go back into the society's coffers by default.

MENDOCINO.

HOPS.—*Ukiah Press*, Aug. 16: Several of our largest hop growers will commence to gather hops on Monday next. The crop is in an excellent condition.

PANTHER.—On Friday of last week Frank Marble and L. Garsey killed a large panther on the Sanhedrim. It measured nine feet and six inches. Its foot measured five and a half inches. Mr. Marble says it is the largest one he ever killed, having killed about 80. He must have been a monster in strength, having packed a sheep on his back upwards of 200 yards without dragging it, and in only one place left an evidence that he was packing his prey, and that was in crossing a large log. He also killed a two-year-old heifer before attacking the sheep.

SACRAMENTO.

PICKING HOPS.—*Valley Agriculturist*: Who are to pick the hops? Heretofore with the exception of last year, only Chinese were employed by our hop growers in Sacramento county to pick their hops, but it is the desire of all with whom we have conversed this season, to give the work to white men and boys, if sufficient numbers can be found to do it. There is but a short time in which to do the work, and the hops must be gathered when sufficiently matured. Much depends upon the manner in which they are taken from the vines. No doubt there are plenty of men and boys who would like the work, but the trouble is that most of those having hop-yards are not prepared to board the help, as Chinamen always board themselves. In yards near the city, such as Mr. Fluit's, the hands can board in the city, and this difficulty is obviated; but most all the hop-yards are so far from any town that the help must be fed on the premises. Mr. A. Menke informs us that he is anxious to give his work to the white men, and that he will pay 25% more for white help than he can get Chinese to work for. But he wants some one to take the contract for picking the entire crop, and says it will require 100 men five weeks to gather the crop. He will pay \$1 per hundred pounds, and it takes an experienced hand to pick 200 pounds. Who will take the job and give our boys a chance to work?

STUDY AT HOME.—Miss Ticknor, of Boston, the Secretary of the Woman's Society for the Encouragement of Study at Home, makes an interesting report. The movement began five years ago, as an experiment, with only forty-five pupils. It has now extended to thirty-four States, and has 899 women enrolled as students. It is an enterprise which every thoughtful person must approve, in the interests of social and domestic culture. The teaching is mostly done by correspondence, an annual fee of \$2 furnishing the wherewithal to cover all expenses. Books are loaned and sent to remote villages, even on the frontier. Written examinations are had at stated intervals, printed questions being forwarded for that purpose. "This is a splendid test of the perseverance of the distant and often solitary student." Of separate correspondences there were 1,021 the last year, the department of history alone requiring over three thousand letters. Ninety-eight ladies give their time to this branch of the work, and are in fact profes-

sors in a university wide as the continent. The phonograph has come just in time to aid the growth and efficiency of this unique and praiseworthy form of human kindness. By means of societies and inventions the old saying will ere long be reversed, and the stay-at-home traveler will acquire the most—the mountain will actually come to Mohammed. It is only a question of time.

SAN JOAQUIN.

PEARS.—*Stockton Independent*, Aug. 15: The pear crop this year is very much worm-eaten, particularly the delicious Bartlett pears, that have given California such fame for their remarkable perfection. We have never seen blemish in California pears before, and it is a matter of serious regret that they should begin to show the same defects which mark Eastern fruit. It has been a boast that one might bite into a California pear, peach, apple or plum in the dark and be positive that they contained no worms or other defects; but from the appearance of the pears this year it is evident that this cannot now be said. [This is the work of the codling moth of which we have had full description and suggestion of remedies. EDITORS PRESS.]

BIG THRESHING.—We published yesterday an account from a Modesto paper of a feat in threshing accomplished by Mr. Thomas Young, who threshed 1,535 sacks, or 3,453 bushels of grain in one day, with a 35-inch cylinder Pitts' machine. This feat was surpassed on Saturday by Mr. William Love, on J. D. Patterson's ranch near Grayson. With a machine of the same size and pattern as that used by Young, and run by an Enright straw burner, he threshed 1,915 sacks, or 4,404 bushels of wheat from daylight till dark. One man sewed all the sacks and another piled them. If there is anything on record that will beat this we have never heard of it. The outfit consisted of 15 men. Another gentleman who was at Grayson Sunday says the number of sacks threshed was 2,005, but we give the lowest figure as large enough.

CLAIMED INJUSTICE TO STOCKTON.—A dispatch from Stockton says: There is a little excitement amongst wheat dealers about the order of the Central Pacific company to furnish no cars up the valley to shippers. Stockton people are indignant at the discrimination and the bad faith of the Central Pacific company. The supposed cause is to favor a few shippers for Oakland wharf. It is likely a temporary favor to help shippers there.

TUOLUMNE.

EDITORS PRESS:—Tuolumne county has not been represented in your practical paper for a few weeks. Fruit time keeps us busy, drying, preserving, etc. Those in the immediate neighborhood of Sonora find relief in the patent drier, but it does not pay to freight the fruit 10 or 15 miles. Columbia and Sonora have each a drier, which will add to native industry. The apple crop is prematurely falling from the trees, owing to the presence of a worm or grub being found in the core. [Codling moth again.—EDS. PRESS.] The peach crop seems sound and of good quality. Plums are of fine quality and unusually abundant. Pears are not so plenty; last season's crop impoverished the trees, and rest seems necessary after an over crop. Egyptian corn seems to flourish in this county, especially the brown variety. The white refused to germinate in many localities. Wheat comes in freely from the great plains. Price, \$1.90 by contract; special lots, \$2. The wheat grown on the plains below the foothills is of the very best quality, free from rust, etc., and is eagerly bought up by the millers, Mr. Bell engaging by contract 400 or 500 tons. Mr. Bell's flour is of a very superior quality, being preferred to any other brand which comes into the county. His mill is situated within a mile and a half of Sonora, on Wood's creek, famous for its richness in the early days of pioneer experience. Bodie stages are doing a good business. Freight is plenty for same region. Weather is moderating; the heat has been oppressive. Fruit ripens faster than fingers can utilize it.—JOHN TAYLOR.

The Fair Season.

The following is a partial list of the coming fairs. We shall be pleased to add to it if readers will send us the dates and locations of their respective exhibitions:

San Francisco Mechanics' Institute, San Francisco, August 13th to September 14th.
California State Agricultural Society, September 16th to 21st, inclusive.
Oregon State fair, at Salem, October 8th to 18th, inclusive.
Nevada State Agricultural, Mining and Mechanical fair, at Reno, October 7th to 12th, inclusive.
Montana Agricultural, Mineral and Mechanical fair, at Helena, September 23d to 29th, inclusive.
Sonoma and Marin district fair, at Petaluma, September 23d to 28th, inclusive.
San Joaquin valley district fair, at Stockton, September 24th to 29th, inclusive.
Northern district fair, at Marysville, September 23d to 28th, inclusive.
Golden Gate district fair, at Oakland, September 9th to 16th, inclusive.
Napa and Solano district fair, at Vallejo, September 3d.
Monterey county district fair, at Salinas City, October 8th to 12th, inclusive.
Siskiyou county fair, at Yreka, October 2d to 5th, inclusive.
El Dorado county fair, at Placerville, September 13th to 16th, inclusive.
Santa Clara valley fair, at San Jose, September 30th to October 5th, inclusive.
Stanislaus County Stock Growers Fair, at Modesto, October 9th to 11th, inclusive.
Southern California Horticultural fair, at Los Angeles, October 14th to October 19th, inclusive.
Southern California Agricultural Society's fair, at Los Angeles, October 14th to October 19th, inclusive.
Plumas, Lassen and Modoc District Fair, at Susanville, Lassen county, October 21st to 26th, inclusive.

News in Brief.

HON. BAILIE PEYTON died August 18th. The Indian famine continues very distressing.

A REVOLUTION has broken out in San Domingo.

AUGUST 16th Parliament was prorogued until November 2d.

A THOROUGH survey of the Columbia river bar is in progress.

THE wool crop of Douglas, Oregon, this year is put at 1,500,000 pounds.

HOP lice are troubling the vines in central New York to a fearful extent.

AMERICAN dried apples are now in demand in most of the countries of Europe.

In three days 130,000 quarts of blackberries were shipped from Vineland, N. J.

AUGUST 13th, a fight occurred in Ottawa between Young Britons and Union men.

THE run of salmon in Fraser river stopped when the eclipse took place.

In Lane county, Oregon, the wheat is found to be of better quality than for several years.

AN English miser has left all his money, over \$300,000, to charitable institutions.

The British ship *Lupata* carries 35,580 cases of salmon from Oregon to Liverpool.

It is rumored that the Western powers have agreed to a French protectorate over Tunis.

GEN. WILLIAMS is preparing to reclaim 7,000 acres more on Union Island this season.

TURKEY has no money with which to carry out her reforms. Now England step forward.

FIVE masked men boarded a Kansas Pacific passenger train Aug. 13th, and carried off \$5,000.

THE lands north and west of Fresno will probably soon be watered by canals from the San Joaquin.

THE Solano winter sown grain is turning out much better than the summer-fallow or volunteer.

THE crops in the Dominion of Canada are excellent. The yield of grain is greater than ever before.

BAKER PASHA and three colonels are now the only English officers retained in the Turkish service.

ONE Palmyra, Wis., man has shipped 75 tons of cheese so far this season. Much of it went direct to England.

THE British fleet at Constantinople organized an international regatta. The first sailing prize was won by an American yacht.

THE Mexican minister at Washington says that it is the wish of Diaz to keep peace with the United States.

THE whole number of incorporations filed in San Francisco last year was 409, of which 265 were by mining companies.

THE Alcalde of Newtown, Mexico, has given information implicating high Mexican authorities in border troubles.

THE last shipment but one of nuggets from the Silver King mine, in Arizona, assayed in Frisco \$17,000 per ton.

A BOY died recently in London from the effects of a blow on the head with a book inflicted by his teacher in school.

THE Madras Presidency in India has been suffering from a plague of locusts, which has greatly aggravated the distress from famine.

Rev. George Gilfillan, author of "A Gallery of Literary Portraits," "The Bards of the Bible" and "The Scottish Covenanters," is dead.

JOHN BOGGS, of Colusa county, says that a million dollars worth of grain has been destroyed in that county this season by rust.

COMMISSIONS for the reorganization of Bulgaria and Eastern Roumelia will meet in September.

THE net yield of the Eureka mines for the quarter ending June 30th was \$788,988.74, upon which a tax of \$15,799.77 was levied.

A NINE days' prayer has been ordered in all the Catholic churches of New Orleans for the abatement of the yellow fever scourge.

THE Servian Minister of Finance is negotiating with Paris bankers for a loan of 24,000,000 francs, to redeem debts contracted during the war.

WASHINGTON August returns to the Department of Agriculture show an average condition of the cotton crop in 10 cotton States of 95, a decline of 4.

ALL the banks of Chili have suspended specie payments. The Government has drained them to carry on an intended war with the Argentine Republic.

EINSTEIN BROS., San Francisco, wholesale boot and shoe manufacturers, closed their doors August 16th. Liabilities, \$800,000. Over 200 employes were thrown out of work.

At the Geneva World's Convention of Young Men's Christian Associations there are delegates from America, Belgium, England, France, Holland, Spain, and Protestant cantons of Switzerland.

THE four per cent. loan is a success. The total amount subscribed will, at the end of August, be about \$65,000,000. An encouraging feature is that many small subscriptions have been made.

It has transpired that the murder of Tullis on his ranch beside the Sacramento river August 1st, was accomplished by assassins hired to do the deed by Troy Dye, public administrator of Sacramento county. Dye's object was to make money from Tullis' estate, which would come into his hands as public administrator. Dye and one of the murderers named Anderson are in custody and have made full confessions. One of the murderers is still at large.



The Thirteenth Mechanics' Fair.

Industrial Art, the mistress of the world,
Greater than Babylon, Egypt, Carthage, Rome,
Or earlier empires, now in silence curled,
Built her temple by the sea's white foam,
And on the peopled hills above our bay,
Where thoughtful souls of men might daily come,
Alike in morning's gold and evening's gray,
To worship in the wonders of her home.

By the broad, paven streets it looms and shines;
Built of dark oak and of sea-sprinkled fir,
And redwood of Navarro, and the pines
Of white Sierras, where the storm-winds stir
Among the snow-peaks! Lo! the myriad tents
Of husky trades are as an army here;
While thro' the long aisles sweep the brooding scents
Of spices of the East, and sacred myrrh.

Here those proud demons of Arabian lore,
Steel, water, coal, and spirit-heating fire,
Fill the great building with their toil and roar,
And penting effort and untold desire.
Giant engines, wrought in gloomy midnight hours
By former heroes, whose souls did aspire
To wield dumb Nature's secret, nightier powers,
Till Science won Steam's passion vast and dire;

Here lie the products of the quivering looms,
Touched now and then by maiden's fairy hands,
That fill the air with melting, rich perfumes,
And gleam as waves across the sunlit sands;
And here are inlaid tables of most precious woods,
And flashing jewels set in golden bands,
And singing shells from island solitudes,
And savage weapons from rude tropic lands.

Here sunlight from a thousand faces took
A little shadow of themselves to make
Unfading pictures. Here's a painted brook
With trembling weeds, that in a slumbering lake
Slips idly, under dark and ancient trees;
Here waves of Saxon battle proudly shake
Some smoky fort; or, on the dreadful seas,
A shipwrecked sailor sees the morning break.

Here happy lovers pass unheeded hours,
And wander slowly down the crowded aisles;
Here weary merchants find a realm of flowers
And rest beside the fountain's dewy smiles;
Here laughing children in bright clusters go,
And bless our sight with their enchanting wiles;
Here human tides forever ebb and flow,
Along the great hall's bright, unending miles.

Lo! Labor's Temple! it is seal and sign
Of coming victories on wave and shore.
For men climb upward, by their gift divine,
Along the mountain heights that shine before.
Whist glowing sunlight as a fountain, fills
The universal earth from dome to floor,
Our age with hope, as a keen beetle thrills;
So we search Nature's secrets e'er and o'er.

—C. H. Shinn, in *Mechanics' Fair Daily*.

How Mr. Jerome Mordaunt Squared His Accounts.

"And he really owes all this money?" said Mrs. Castlethorpe.

She was a tall, portly old lady, with a false front of intensely brown curls, a fresh complexion, and spectacles that seemed to gleam at you like two twin moons every time she looked your way, and she always wore black satin, with a neckerchief of white tulle, and a heavy gold chain wound round and round her neck and falling in glittering festoons across her chest.

"Yes, ma'am," said Mr. Andrey, her legal adviser, "I'm afraid he does."

"Then," said Mrs. Castlethorpe, "he's a downright liar."

"Very likely, ma'am," said Mr. Andrey, dryly. "Young men have misrepresented facts before now, and will again, I'm afraid."

"But be told me that the last \$800 would settle all his debts, and here is a washerwoman's bill, a tailor's account, a bootmaker's little memorandum, and \$30 borrowed of Higgins, the jeweler, on a set of ruby shirt studs; to say nothing of these other bills;" and Mrs. Castlethorpe nodded her head towards a pile of slips of paper that lay under an ivory weight at her left hand. "Why, its perfectly disgraceful! He has deceived me! He has perjured himself out and out!"

Mr. Andrey looked wooden and imperturbable. To him every phase of human roguery and duplicity seemed not only possible, but probable.

"But I won't stand it," cried the old lady, growing more and more excited, "I'll teach him a lesson!"

"You will cut off supplies, ma'am?" said Mr. Andrey, interrogatively.

"No—oh no!" said Mrs. Castlethorpe, scratching her nose with the point of her crochet needle. "I'll let him have the \$500 I promised him. I am a person of my word, whatever he is," with an accent of infinite scorn. "But, Andrey, I haven't told you about the worst debt of all!"

"Indeed, ma'am?"

"His landlady's daughter, a poor, little, blue-eyed thing, with her head hanging down, and the prettiest yellow hair I ever saw, came here yesterday. He owes her a heart!"

"Borrowed, ma'am?" said Lawyer Andrey, with a twinkle of his dark eyes.

"Well, yes," assented Mrs. Castlethorpe, grimly. "Engaged himself to her while he boarded there. Dropped her completely when he was able to remove to more aristocratic quarters. Broke her poor little heart. *Bien!* he shall mend it again."

"Do you think it is probable, ma'am?" asked Mr. Andrey, rather dubiously.

"I will make it probable!" said Mrs. Castlethorpe, resolutely. "You're not engaged to dinner for to-morrow evening, are you, Mr. Andrey?"

"I believe not."

"Pray give us the pleasure of your company, then," said Mrs. Castlethorpe, "at six precisely, to meet my nephew Jerome, and a select few of his friends."

"Full dress?" asked the lawyer.

"Oh, of course!" said Mrs. Castlethorpe, briskly.

And Mr. Jerome Mordaunt, lounging over a French novel in the elegant seclusion of his apartments, was puzzled at the note he received from his rich aunt:

"Dear Jerome: Come to dinner at six to-morrow night, and we will have a little talk over your affairs. The \$500 will be ready. Your affectionate aunt, CONSOLATION CASTLETHORPE."

"The old lady is coming to her senses, eh?" said he, folding the billet into the shape of a cigar lighter. "Well, I'm glad of that. I couldn't have kept up the campaign much longer without ammunition! I'll be there punctual to the minute, dear Aunt Conny may be quite sure!"

He was as good as his word. At six to the second, he howed himself debonairly into Mrs. Castlethorpe's old-fashioned dining-room, old-fashioned, but eminently comfortable. A fire of anthracite coal glowed and crackled in the grate; wax candles shone with white luster in silver candelabra, and a large center-piece of flowers decked the middle of the board, while solid silver, glass ornamented with a monogram, and painted china were arranged to the best advantage. Mrs. Castlethorpe was rich, and she liked to show it.

"Oh! it's you, Jerome is it?" said she. "Pray walk in. Take that seat at the head of the table. You are my guest of honor to-night. Jones," to the old butler, "show in my other friends."

And while Jerome Mordaunt was marveling what this unusual politeness could portend, old Jones threw open the folding doors, and in marched Lawyer Andrey, followed by Hitchem the tailor in his Sunday's best, Mrs. Riordan, the washerwoman in a surprising mob cap. Next, the consumptive little bootmaker, Higgins, the jeweler, Pricken, the cigar merchant, and Spill, the wine dealer. While last, but not least, followed Mrs. Nuttingdale, the boardinghouse-keeper, and her pretty, blushing daughter, Ruth.

Mrs. Castlethorpe stood in stately dignity at her end of the table, while Jones marshaled the miscellaneous crowd of guests to their seats. Jerome sprang from his chair with a low, muttered exclamation at first, but seated himself again. Evidently he was "in for it," to use a popular and most expressive phrase, and the only way was to make the best of a bad bargain.

The dinner progressed. Fish succeeded soup, game and entrees followed fish, elegant side dishes came and went, and with the grapes, pineapples and ices came rare wines and champagne. Mrs. Castlethorpe rose with the dignity of a hostess of the old school.

"A health, ladies and gentlemen," said she. "Fill your glasses, all. Are you ready? Then I propose the health of the man who pays his debts!"

It was drunk with acclamation. Only Jerome Mordaunt colored and hesitated.

"Jones," said the old lady, "please hand these five hundred dollars—in small bills, Jones, take particular notice—to Mr. Mordaunt. Gentlemen and ladies," to the guests, "pray present your little accounts; my nephew is ready to audit them!"

Mr. Mordaunt opened and shut his mouth two or three times, in a feeble, gasping way, like an exhausted fish; but he uttered no audible remonstrance. He knew it would be of no use.

"Of course," he said, "I shall do as my aunt advises."

One by one the hungry-eyed guests advanced, presented their little accounts, and retired, with satisfied countenances, until not a personage was left except Lawyer Andrey, Mrs. Nuttingdale and her daughter, and the hostess.

"Now for the last settlement of all," said Mrs. Castlethorpe, with an inexorable countenance. "Jerome, I believe you are under an engagement to marry this young lady?"

Jerome Mordaunt, face to face with poor, pale, trembling little Ruth Nuttingdale, could not deny it.

"Jones," pursued Mrs. Castlethorpe, "ask the Rev. Mr. Tyson to walk in. Here is a wedding ring, my own 40 good years ago, and I hope none the less lucky for that. Stand up like a man, Jerome, and you close to him, my dear. Now we are quite ready, Mr. Tyson, if you please."

And almost before Jerome Mordaunt realized what was going on, he was married, safe and sound, to Mrs. Nuttingdale's blue-eyed daughter, Ruth.

"I congratulate you, my dear," said Aunt Castlethorpe, with a sounding kiss. "I wish you all joy as Mrs. Jerome Mordaunt, and here's a check for one thousand dollars to begin life with."

"Thanks, dearest aunt," smiled the blushing bride.

And now you are square with the world, so far as I know, Jerome," said she austerely to her nephew. "See that you remain so for the future, for you'll get no more help from me. And now I'll bid you all good night, for its get-

ting late, and I need my after dinner nap."

And so closed Mrs. Castlethorpe's dinner party, with an impromptu wedding.

Ingratitude to Parents.

There was once a father who gave up everything to his children—his house, his fields and goods—and expected that for this his children would support him. But after he had been some time with his son, the latter grew tired of him, and said to him: "Father, I have had a son born to me this night, and there, where your arm-chair stands, the cradle must come. Will you not, perhaps, go to my brother, who has a larger room?"

After he had been some time with the second son, he also grew tired of him, and said: "Father, you like a warm room, and that hurts my head. Won't you go to my brother, the baker?" The father went, and after he had been some time with the third son, he also found him troublesome, and said to him: "Father, the people run in and out here all day, as if it were a pigeon-house, and you cannot have your noonday sleep. Would you not be better off at my sister Kate's, near the town-wall?"

The old man remarked how the wind blew, and said to himself, "Yes, I will do so; I will go and try it with my daughter. Women have softer hearts." But after he had spent some time with his daughter, she grew weary of him, and said she was always so fearful when her father went to church, or anywhere else, and was obliged to descend the steep stairs, and at her sister Elizabeth's there were no stairs to descend, as she lived on the ground floor.

For the sake of peace the old man assented, and went to his other daughter. But after some time she, too, was tired of him, and told him, by a third person, that her house near the water was too damp for a man who suffered with gout, and her sister, the grave-digger's wife, at St. John's, had much drier lodgings. The old man himself thought she was right, and went outside the gate to his youngest daughter, Helen. But after he had been three days with her, her little son said to his grandfather: "Mother said yesterday to cousin Elizabeth, that there was no better chamber for you than such a one as father digs." These words broke the old man's heart, so he sank back in his chair and died.—*Martin Luther*.

Prescription for Fits.

For a Fit of Passion.—Walk out in the open air. You may speak your mind to the winds without hurting anyone, or proclaiming yourself to be a simpleton. "Be not hasty in thy spirit to be angry, for anger resteth in the bosom of fools."

For a Fit of Idleness.—Count the tickings of a clock. Do this for one hour, and you will be glad to pull off your coat the next and work like a man. "Slothfulness casteth into a deep sleep, and an idle soul shall suffer hunger."

For a Fit of Extravagance and Folly.—Go to the workhouse, or speak with the ragged and wretched inmates of a jail, and you will be convinced.

"Who makes his bread of briar and thorn
Must be content to lie forlorn."

"Wherefore do ye spend money for that which is not bread? and your labor for that which satisfieth not?"

For a Fit of Ambition.—Go to the churchyard and read the gravestones. They will tell you the end of man at his best estate. "For what is your life? It is even a vapor that appeareth for a little time and then vanisheth away." "Pride goeth before destruction and a haughty spirit before a fall."

For a Fit of Repining.—Look about for the halt and blind, and visit the bed-ridden, the afflicted, and the deranged; and they will make you ashamed of complaining of your light afflictions. "Wherefore doth a living man complain?"

For a Fit of Envy.—Go and see how many who keep their carriages are afflicted with rheumatism, gout, and dropsy; how many walk abroad on crutches or stay at home wrapped up in a flannel; and how many are subject to epilepsy and apoplexy. "A sound heart is the life of the flesh. Envy is the rottenness of the bones."

THEN AND NOW.—Prof. Du Bois Reymond is writing a notable series of articles for the *Popular Science Monthly*, concerning the uprising of the modern scientific idea. He takes occasion to contrast the present with the past as follows: "Man, whom we first met as a tool-making animal, is now become a rational animal who travels by steam, writes with lightning, and paints with the sunbeam. The re-conversion into work of the sunlight stored up in 'black diamonds' multiplies his energy a million-fold. The Seven Wonders of antiquity, the engineering works of the Romans, bear no comparison with the enterprises every day undertaken by our own generation. The periphery of our planet threatens to become too narrow for man's genius. Hardly any secrets do his sights and his depths still conceal from him. Whichever man is powerless to go bodily, his mind penetrates with the aid of the magic key of calculation. In the blackest night, on the stormiest sea, his bark steers the shortest course; she dexterously shuns the track of the destroying typhoon. Geology does all that the divining rod was once supposed to do, giving us plentiful supply of water, salt, coal and petroleum."

Muscle and Brains.

In an address at the laying of the corner stone of the new Colorado State College of Agriculture, Hon. J. C. Shattuck said: "I take the risk of shocking the notions of some people when I say that there is not a particle of dignity in manual labor alone. If such be, in itself, ennobling, then the peasant woman of Europe, yoked in the field beside a cow, or the galley slave, driven to exhausting toil by deadly weapons have reached the acme of human dignity. Would it be elevating for a farmer to go into his grain field to-day with a sickle, and, by dint of hard work and long days, cut and bind an acre a day, when, with a pair of horses and a self-binding reaper, he can accomplish the same in an hour? The one is muscle, pure and simple; the other is muscle, under the control of an intelligent brain. When a man performs the labor of an ox, it gives no more dignity to the man than to the ox; but when an ox is forced to a man's work, the man's superiority becomes manifest. While man depends on muscle alone, all nature holds him at a disadvantage. A squirrel can outrun him; even a calf excels him in strength; the tiny humming bird almost defies the glance of his eye; the beasts of the field devour him with impunity; the waters drown him; the soil yields him but a beggarly sustenance, and in her own rock-ribbed bosom, earth hides her jewels far beneath the reach of his unaided hand. It is only when man turns from puny muscle to kingly brain that he walks forth a monarch, and hrid and beast and water and air, and the lightnings of heaven even, accept his sway. And yet, till within 200 years, the most numerous, the most important class, the tillers of the soil, in all lands and climes, have been hinds and boors and slaves, who have gone forth to toil with the collar of the master about their necks, and on their foreheads the mark of him who was rich because they were poor. Thanks be to God, that, in America at least, this is past—past forever."

GARMENT CUTTING MACHINERY.—The garment cutting machine which received the award at Philadelphia is being shown at the Paris Exposition. The following note is made on the construction of the machine. By adopting a long arm for carrying the upper pulley, a conveniently large table is obtained, and a certain amount of elasticity given to the knife, which is carried back, well out of the way, by the third pulley employed. Large and unwieldy pulleys are thus avoided. A simple and effective means of sharpening without removing the knife is provided in an emery-wheel fixed under the table, and driven from a pulley on the underneath shaft. We understand that from 3,000 to 5,000 garments can be cut weekly by one of these machines, thus rendering them invaluable to the large clothiers.

"GREASING" A BUGGY.—The *Vallejo Chronicle* says: J. W. Farmer hired an old sailor to work around his place the other day. The man is a willing soul, but his knowledge of farm matters is fearfully limited. The next morning Mr. Farmer told him to go out and "grease the buggy." The man went, and when Mr. Farmer not long after stepped to get into the vehicle to come to town, he drew his hands back in wonder to find them greased. Examination showed that the whole buggy from top to bottom, running-gear, body, shafts and all were covered with a slick coating of grease; everything was greased excepting the axles. The man had also greased a carriage in the same careful and thorough manner, even to its whole top, and stood by admiring his handiwork with all the satisfaction of a person who thinks he has done a job exceptionally well.

WHO BELIEVES THIS?—There is a celebrated professor in Germany whose works on Biblical science are authorities, who is singularly ignorant of all affairs save his studies. He was lately paid a large sum of money by his publisher, on account of copyright funds. The amount was more than he could use for present demands. "What on earth can I do with all this money?" he asked, in real distress. "Why," replied the publisher, "you can put it out at interest." After thinking a moment in evidently greater anxiety, he continued: "No, no, that will never do, for don't you see that will make it still worse, for there will then be ever so much more of it."

TRAMPS AND LEGISLATION.—New Hampshire is another of the States wheeling into line on the tramp question. The New Hampshire bill makes begging an offense punishable by hard labor in the State prison not more than 15 months. Entering a dwelling house, carrying fire-arms, or threatening injury, subjects one to imprisonment for two years. Injury to the person or estate of another by a tramp sends him to prison for five years. Any person who prosecutes an offender under this act is entitled to a reward of \$10.

PEPSINE FROM THE OSTRICH'S STOMACH.—According to the *Revue des Deux Mondes*, the ostrich hunters of South America, bearing in mind the almost incredible digestive powers of that bird, extract the pepsine from its stomach, and sell it for its weight in gold to dyspeptics.

A CHICAGO girl got \$7,500 damages for having one leg shortened by a fall through a coal hole. We've known tall young women who would give that sum to have both legs shortened.

Chaff.

WOMAN'S sphere—that she won't get a rich husband.

"TRUTH is stranger than fiction," because so few know how to tell it.

A HEAVY duty on T has been in force for years—crossing it.

"JIM, I want to smoke; lend me pipe, tobacco and matches; I've got a knife."

"BROIL over a baby," says a daily paper. Couldn't they do it done the first time?

We don't give any credit for what jokes we steal. It would distinguish us forever.

No baseballist has ever gone to Congress. We shall join a club at once for safety.

THE hand of a lady is a thing of beauty, and yet fashion covers it with the skin of a goat.

"GOING to Paris? Non, non, monsieur. Je n'ai pas le spondulix."—*Rochester Chronicle*.

THE woman who maketh a good pudding in silence is better than she who maketh a tart reply.

MILKMAIDS are different. The milk made in the country is different from the milk made in the city.

PULL-BACKS in trade have a contrary effect to pull-backs in garments. They set one down easily.

WHAT riles a country postmistress is to have a postal card come to the office written in French.

A LADY, joking about her nose, said: "I had nothing to do in shaping it. It was a birth-day present."

BEACONSFIELD has been invested with the Order of the Garter. We propose to order a pair at once.

WHICH is the better, mating or cremating? St. Paul said it was "better to marry than to burn."

THREE sons of Brigham Young have been appointed to West Point in six years, and more await their turn.

OVER at the exposition they are laying up something for a rainy day—not an umbrella, but a Paris-haul.

AN Illinois lady cattle farmer took \$1,150 premiums, last season stock. Has she a "brute" of a husband?

BOSTON still continues to shrink—on the assessor's books. If she keeps it up he'll have to invent a half dollar mark soon.

"LOVE is an eternal transport!" exclaimed an enthusiastic poet. "So is a canal-boat," said a practical old forwarding merchant.

One of Jasper's converts is frank enough to reply: "I doan know wedder I've got religion or not. Try me wid a chickun."

It is a curious scientific fact that the success of a steam-propeller is largely due to the fact that there's a screw loose somewhere.—*Ex.*

EDGAR FAWCETT wishes "man could make love like a bird," and a chorus of bachelors is heard: "He does, Edgar, he does; like a goose."

SOMEBODY prints a book to show how to get "25 cent dinners for families." Now let somebody print a book showing how to get the 25 cents.

THE man without a memory has gone to the Paris exhibition. So his washerwoman told us this morning. His account remains behind, but it is used to beug there.

ANY man can tell you what he don't believe, but very few can explain lucidly what they do believe, except planting watermelons in the light of the moon.

WHEN a man reaches the top of a stairway and attempts to make one more step higher, the sensation is as perplexing as if he had attempted to kick a dog that wasn't there.

THE streets in Paris are kept so clean and tidy, that the people who are run over and killed, do not look as mused as a New Yorker who slips on an orange-peel.

"THE wicked stand in slippery places," but for a perfect picture of reckless insecurity, you want to look at a frightened woman trying to stand on a campstool to keep out of the way of a mouse.

THE man who is curious to know how the world can get along without him, can find out by sticking a cambric needle into a mill pond and then withdrawing it and looking at the hole.

OLE BULL threatens this country with another farewell tour of thirty concerts. His first farewell tour—how well we remember it, was made when we were—were a boy, sixty-two years ago.—*Hawkeye*.

A PRACTICAL view: Miss Grabbaule—"Well, we've made something out of our parties, anyway. They left five fans, and Alice Roseleaf dropped this lovely curl—just my shade. She won't ask for it so I mean to keep it."

SAID Brown to Parker: "I say, Parker, what's the difference between a ripe watermelon and a rotten head of cabbage?" "Give it up; can't tell." Brown laughed softly as he said, "You'd be a nice young man to send to buy a watermelon, you would!"

If the wife be in debt before marriage, the husband, in making love to the lady, has been actually courting the cognovits she may have entered into, and if the wife is under an obligation for which she might be legally attached, the husband finds himself the victim of an unfortunate attachment.

THERE are two brothers on West Hill, who look so much alike they cannot tell each other apart; and one day last week, when John was raging like a volcano with the toothache, Henry went down to Dr. Wilson and had six teeth pulled.—*Hawkeye*.

Young Folks' Column.

The Hired Squirrel.

A lion to the squirrel said,
Work faithfully for me,
And when your task is done, my friend,
Rewarded you shall be
With barrel full of finest nuts, fresh from
My own nut tree."
"My lion king," the squirrel said, "to this I do agree."

The squirrel toiled both day and night,
Quite faithful to his hire;
So hungry and so faint, sometimes,
He thought he should expire.
But still he kept his courage up, and tugged
With might and main.
"How nice the nuts will taste," he thought,
When I my barrel gain!"

At last, when he was nearly dead,
And thin and old and gray,
Quoth lion: "There's no more hard work
You're fit to do. I'll pay."
A barrel full of nuts he gave, ripe, rich
And big; but oh!
The squirrel's tears ran down his cheeks;
He'd lost his teeth, you know.

How the Children Saved the City.

If you were in Hamburg during the latter part of June you might see a procession of chubby, merry children, clad in white garments, marching through the streets of the city, singing psalms and carrying in their hands green boughs, to which are bound bunches of red, ripe berries. It is like a picture from a fairy book, this procession of little ones, all happy and innocent, attired in their holiday frocks and kirtles, the boys sporting gay feathers in their caps and the young girls radiant with bright ribbons twined among their glossy braids.

During the early days of the sixteenth century Hamburg was at war with Denmark. In the early springtime a great army sat down before its walls, under the Danish king. Two months the siege continued, and there was no bread in the city for the people to eat. Meanwhile the Danish warriors drew the lines closer and closer around the beleaguered city, and King Christian swore that every man, woman and child within it should perish.

Sad hearts and grewsome faces dwelt within the German city, and great gloom fell upon the people. Even the stalwart warriors, who wore battle armor and carried weapons of war, wandered like grim ghosts along the battlements of the beleaguered city.

In the midst of the city a man named Wolfe had a garden. It was a grand garden full of fruit trees, and enclosed by a high stone wall. Wolfe had acquired wealth and fame by the sale of his cherries, and through all Germany there was no such fruit as grew in this garden. As the owner returned one day from the walls, where he had borne spear and morion, he saw the red sheen of his ripe cherries shining through the green leaves. The trees were in their blossom when the siege began; now their fruit hung ruddy and delicious, a superb sight in the hot summer sun.

Suddenly a thought, born of inspiration, flashed through the mind of Wolfe, and a hope sprang up that he might yet save his fellow-townsmen. Save them how? By his cherries, those ripe crimson clusters which loaded his orchard with such bounteous harvest. But there was very little time for him to work in, for by another day the people would be wild with the delirium of hunger. He quickly assembled 500 children, the noblest youth of Hamburg, and dressing them all in white, the funeral color of that time and country, put cherry boughs in their hands, and ordered the gates to be opened. Then this array of children, dressed in mourning garb, and bearing those green branches, heavy with rich, juicy cherries, went forth to meet the fierce Dane, who had vowed them to destruction.

Christian, King of Denmark, sat in his tent, with his chieftains about him, when a sentinel told him that a procession was approaching from the city.

"It is a body of children, and they are dressed in white, and carry green branches in their hands," cried a soldier, who had been keenly watching the advancing procession.

"They come to mock us. By Saint Christopher they shall suffer. They shall die even as I have sworn all the people of the city shall perish," and the cruel king put on his helmet, and rose to order his bodyguard to do their duty.

But when the procession of little ones appeared before him, and he saw the poor children so thin, so pale, so wasted with hunger, the stern warrior's heart was touched. He was a father, and a little prince, who bore his name, was growing up in the old palace at Copenhagen, and he thought of what might be his fate if the fortunes of war should place Denmark under the heel of a conqueror. A spring of fatherly love, that had long been choked up in him, broke forth. Pity made his lips tremble, and the stern eyes filled with tears. What the mailed warriors of the city had failed to do the peaceful children in white did—they conquered the hard heart.

That evening the little cherry-bearers returned to the city, not as they went forth—thin with hunger and trembling with fear—but happy and merry as singing birds. With them went a

great train of carts, filled with provisions for the starving people—bees and sheep and wheaten loaves—enough to feed the whole populace. And better tidings they bore even than those which the watchers could read from the city walls. The Danish king had granted peace, which was actually signed in a formal manner on the morrow.

GOOD HEALTH.

Notes on Tooth Powders.

The London *Chemist and Druggist* says: "Pharmacy has its fashions as well as other things, and the present prevailing mode is salicylic acid. Dr. Buch, of St. Petersburg, deprecates its adoption as a dentifrice." A short time ago there was a warning raised against the use of charcoal. It had similar dental recommendations, namely, that it was antiseptic, and that as far as cleansing was concerned, it was most effective. But the microscope pointed out that every particle of carbon, in however divided a state, was a small crystal, which, acting by attrition, was hurtful to the enamel. While charcoal, therefore, was said to be a fine saw, salicylic acid is now stated to be a solvent, and accordingly to be abjured. Dr. Ruch mentions that he was in the habit of using a solution of three parts in one thousand of salicylic acid, a lotion of such strength being fatal to bacteria. In a few weeks he felt a curious sensation in his mouth; the teeth appeared to become softer, and on the surface something gritty was detected, there being evidently a granular formation. The doctor believes this to be a salicylate of lime; if so, the use of the acid as a dentifrice should be discountenanced.

"We may here venture to allude to a preparation which, for occasional and careful use, is a valuable remedy for yellow, blackened and unsightly teeth. It consists of equal parts of finely-powdered wood charcoal, prepared chalk and cream of tartar. A few applications are sufficient to effect a decided change, followed by a wash of myrrh, eau-de-Cologne and glycerine. It is suggested as a tried remedy, to be used when wanted, not as a toilet requisite."

THE EAR FUNGUS.—The *Pacific Medical and Surgical Reporter* condenses from an Eastern source the following points concerning the ear fungus, *Aspergillus nigricans*. There are several forms of microscopic fungi found in the human ear, but the *Aspergillus nigricans* is by far the most common. It collects in masses, adhering to the meatus and tympanum, and is commonly taken for wax and washed out. Greater irritation, however, is produced by the growth of the fungus than by the accumulation of cerumen. Its true character can be detected only by the microscope, under which it presents various forms, according to the stages of growth. The presence of wax does not promote its production, but it flourishes on all kinds of abnormal accumulation. Glycerine does not dissolve it as it does the wax of the ear. Its presence is apt to cause pain, and sometimes to induce an eczematous condition. Dr. Burnett removes it by repeated washings with dilute alcohol. He says nothing of other applications, such as salicylic acid and its compounds, which one would think better calculated to destroy the vitality of the parasite, with less irritation to the membrane of the ear.

A NEW SOURCE OF LEAD POISONING.—A rather serious epidemic of lead poisoning was recently discovered in the Taunton sanitary district, England, caused by the holes in millstones having been filled up with lead. The practice appears not to be confined to Great Britain. In the last number of the *Nordiskt Arkiv* is a paragraph taken from a Norwegian periodical, in which it is stated that Dr. O. Johnson, of Sharpsborg, had met with an extensive epidemic of gastric disorder, often accompanied with diarrhoea, for which he could find no cause in the local conditions, nor was there any evidence of contagion. The lead line on the gums was detected, and it was ascertained that the flour which the patients used had been procured from a mill, the owner of which had filled up the holes in the millstones with a mixture of white lead and glycerine. There were no cases of paralysis or brain disease, and the patients all recovered, with one exception. A similar occurrence is reported to have taken place in France from the use of lead to repair millstones.

ANOTHER "CURE" FOR POISON OAK.—Dr. S. A. Brown, U. S. N., states in the *Medical Record* that he has found a specific for the troublesome eruption produced by the poison oak or poison ivy (*Rhus toxicodendron*) so common in our woods. This specific he finds in bromine, which he has used with unvarying success in at least 40 cases. He uses the drug dissolved in olive oil, cosmoline or glycerine, in the strength of from 10 to 20 drops of bromine to the ounce of oil, and rubs the mixture gently on the effected part three or four times a day. The bromine is so volatile that the solution should be renewed within 24 hours from its preparation. The eruption never extends after the first thorough application, and it promptly disappears within 24 hours, if the application is persisted in, and the patient is entirely cured.

DOMESTIC ECONOMY.

A Budget of Recipes.

Hard Sauce for Puddings.—Stir to cream one cup butter with three cups powdered sugar; when light beat in juice of a lemon, two teaspoonfuls nutmeg.

Buttermilk Pies.—One cup sugar, two cups buttermilk, two eggs, two tablespoonfuls flour, two tablespoonfuls butter; flavor with lemon. This makes two pies.

Pop-overs.—One pint milk, one pint flour, butter size of a walnut, three eggs beaten light, pinch of salt; add eggs last. Bake in cups, filling them half full.

Lemon Jelly.—Grate the rind and take the juice of one lemon, pare and grate six sour apples; one cup of sugar, one egg, one teaspoonful of flour; beat all thoroughly together and let it come to a boil. This is very nice to use between cakes in place of other jelly.

Boiling Fresh Fish.—All fresh fish or fresh meats must be put into boiling water; salt fish or salt meats into cold water. Before putting in the fish throw in about two tablespoonfuls of salt for a large fish, a little heaped, and a wine-glass of vinegar. This secures the best flavor of fish, and the vinegar does not affect the taste at all. The water must be boiling when the fish is laid in, but after that it must only simmer. Never boil fish. It is done when it begins to crack or cleave apart from under the gills, if a whole fish; if only a part of a fish it will, when done, spring off a little from the backbone. Don't let it cook a minute longer after that.

Apple Dumplings.—Quarter and core one apple for each dumpling; then put the parts together, with sugar in the middle; surround each apple with pie crust; if you wish to bake them, put them on a pan like biscuits, and set them in the oven. If boiled, tie each in a separate cloth, and boil for half an hour. Serve, both baked and boiled, with liquid sauce.

Cottage Cheese.—When the milk is nicely clabbered put it on the stove and let it remain until well scalded, but do not allow it to boil. Pour both the curd and whey into a bag made of cheese cloth and suspend it until well drained, and the curd is left quite dry; turn this latter into a pan and add salt, a bit of butter, and enough sweet cream to make quite moist. It can be molded into little balls, or put into a glass dish without further preparation.

COOKING POTATOES.—One of the oldest ways of cooking potatoes in France, probably much in fashion long before Paris existed, but, at all events, much patronized even now, is called *a la Point Neuf*. The potatoes are peeled and then cut lengthways into slices a quarter of an inch thick and plunged into a pan of boiling lard. The fat must be boiling, and there must be quite a bath of it. A newer way for cooking potatoes, called *a la Parisienne*, is as follows: Peel them and boil them in water, with a little salt; when cooked take them out of the pot and let them drip quite dry; then mash them and place them in a pot with butter, salt, pepper, some beef liquor and chopped herbs, such as chervil, tarragon, sallion, cives and garden cress. The compound must be well stirred over the fire, and when it is getting quite thick and stiff and attached to the pot take it from the fire; make balls of the mashed potatoes, and put them into a basin in which you have previously beaten a couple of eggs, one or two balls at a time; afterward fry them in boiling butter or lard for a minute and serve them up with fried parsley. If the frying fat is not quite boiling the potato imbibes too much of it, and the flavor is spoiled. The seasoning is naturally the principal thing. A good cook ought to be quite offended at any one using either salt or pepper at table with vegetables, which always taste much better if the seasoning is applied during the cooking.

PARKER HOUSE ROLLS.—Clara Francis, in *Prairie Farmer*: To a pint of warm milk add one or two teaspoonfuls of sugar, and a quarter of a cake of compressed yeast dissolved in a very little water. Lively home-made or bakers' yeast will do, but will take longer to rise. Stir in enough sifted flour to make a batter; cover close and let rise. If the yeast is good it will be very light in an hour and a half of summer weather. Add to the risen batter a little salt, a beaten egg, butter and lard (together) the size of two eggs, and enough flour to make a dough that will not stick to the board or hands in working. Knead well, then return to the bowl and rub the surface with a little lard to prevent a crust from forming; cover warm and let rise again; it should be ready in about two hours. Flour the bread board very lightly and turn the dough on to it. Roll into a sheet an inch thick and cut out with the biscuit cutter. Flatten the center of each piece with the rolling pin, until it is quite thin; butter one-half lightly and fold the other portion over it—not quite even. Make a deep indentation about the center of the half moon, using either the knuckle or the handle of the rolling pin, and place the rolls in regular order in the pan, leaving them an inch apart. Let rise again until very light, and bake in a brisk oven. Just before putting them to bake, brush the surface evenly with a part of an egg beaten with a little milk.



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NEW ADVERTISEMENTS.

Money in Chickens, Edward A. Samuels, Waltham, Mass.; The Randall Pulverizing Harrow, Claude V. Burke, Yolo County, Cal.; Wanted, A Farm, Dawson, at this office; Sharpley Strawberry, Wm. Parry, Cinnaminson, N. J.; E. P. Roe's Pride of the Hudson Raspberry, E. P. Roe, Cornwall-on-the-Hudson, Orange Co., N. Y.; California State Fair, Sacramento, Cal., Robert Beck, Secretary.

The Week.

If the affairs of men move as do the bodies of the solar system, we may be said to be passing through the region of fairs. The season opens finely with the grand exhibition in this city, and the others follow, as shown in the list which we have printed from time to time. The weeks, until another October is well nigh pushed into history, will be filled with assemblages convened in the name of agriculture. This year promises to be marked as the fairest year which the State has known. The older societies are adorning themselves with new architecture as with a garment. State, district and county exhibitions, all will show the effect of money and zeal expended by their managers. The year will also witness the first fruits of several new organizations. So far as we have examined the premium lists, there seems ample reason for a fine comprehensive contest for honors in all the departments of agriculture and mechanical production. Such we hope there may be, for the fair is an educator, and competition for the rewards of excellence is a sharp incentive to superiority. Let it be the constant care of those entrusted with the management, that the education and the competition be not in the line of evil, for evil is fleet enough without the spur of organization.

Have a Care Ye People!

If we have not now reached the sub-cellar of infamy in the administering of public offices, may God help the people! Can the structure of official corruption and administration possibly extend farther down into the depths of utter demoralization, brutality and heinous crime? It is hard to conceive it possible. It will be hard to imagine a thought and action which lays a stronger hold upon the corner stones of perdition, than those which the last week brought to light.

The public administrator of Sacramento county, a man chosen according to the law, to act as guardian over the property of the friendless dead, stands the confessed planner, promoter and purchaser of the murder of a lone old man, in order that he, the public administrator, might get possession of the old man's property, and gorge himself with fees and stealings. With cool persistency, they labored to accomplish their hellish object—this public administrator and his hired assassins. It began in a joke, so his story goes, in this wise: His low-lived associates would rally him by asking, forsooth, what percentage he would allow to those who put out of the way friendless rich men that he might "administer their estates." A "commission" on the results of a murder! California, cursed with "commissions," knew no such ghastly commission as this, before last week. Well, the joke lingered in the thought of the public administrator. About him gathered men who boasted of their foul butcheries, and who "would kill any man for \$100." The idea did not displease this public administrator, this representative of the sacred honor of the people. The joke called forth the wish; the wish the thought; the thought the plan, and the plan pursued with fiendish calmness and ingenuity, ended at length in the brutal murder of a friendless old man, in broad day light, on his lonely ranch beside the turbid waters of the Sacramento. Did the public administrator strike the blow or fire the shot which claved the old man's skull as he sank among the rushes on the river bank? No. But he went out at nightfall along the river to meet his hired murderers, "whistling a song," as he drove along in his buggy, that they might know him; and as he met his bloodstained butchers, this public administrator, embodiment of the people's care for the discharge of sacred trusts, bestowed this devilish plaudit upon his servants: "Boys, you have done pretty well. I would like to have had a hand in it myself. I am going to stand the oysters on this!"

Oh, shame! Shame upon humanity that it could conceive a thought, mature a purpose and promote a deed like this we have described. And yet is it wholly unintelligible? Does it come like a storm from a clear sky? We grieve to say it does not. Is it anything more than the perfect fruit of an evil growth of corruption in public offices, the fetid odor of whose blossoms has often warned the people of its progress? What was the seed whence has sprang this evil growth? It is the idea that a public office is a thing to be employed for the advantage of the officer, and oblivion to the fact that an office is in reality a trust from the people to be discharged for the people. Standing at this point of view it is easy to follow the results of the growth of this idea. It begins with the greedy strife for office, because of its emoluments. Its first leaves are the petty stealings of policemen, clerks and minor civil officers. Its trunk, perhaps, is the appropriation of millions of dollars to personal aggrandizement, under the guise of carrying out vast internal improvements. It has branched and blossomed, as we have said, in the hundreds of malfeasances, embezzlements and perversions in government contracts, in savings banks and the like. Its natural fruitage is the sacrifice of human life, when life alone stands between it and its accomplishment.

Does the murder at Sacramento seem less startling when it is read in the light of the lurid glare of the perdition which is wide spread in our public service? By no means. It has a much darker and deeper significance when thus interpreted. It must be that the people needed this ghastly spectacle before it would fully perceive the evil tendency which is so alarmingly extending. Will it be heeded now? We know nothing of the circumstances attending the choice of this man in Sacramento county for the important trust of public administrator. We

know not what party nominated him, nor do we care. The practical inquiry which is now pertinent is this: Was there nothing about the man or his surroundings which would have forewarned the upright citizen against trusting him? Did he grow all at once into association with professional criminals? Was he so upright a man that any citizen would have entrusted to him his estate without a doubt of his honest management of it? If there was a doubt of any of these things, then he was not the man to name for a public trust, not the man to receive the people's votes. It comes to this, and this only. The safety of the people's life and the people's property, the honest administration of the law, depend upon the choice for office of men about whom hangs no suspicion of evil, and whose life, surroundings and companionship are such as would warrant the imparting of individual as well as public trusts. This is the only safeguard which remains for the purity of our public service. If this lesson be learned in this State from the events of the last week, then the lone old man on the Sacramento will not have died in vain!

QUERIES AND REPLIES.

Cattle Disease in Mendocino County.

EDITORS PRESS:—We have had a new kind of disease appearing among our cattle, entirely unknown before in this county, so far as we can find. We call it the "mad itch." The symptoms are as follows: They walk around uneasily in the beginning, shaking and tossing the head. In a few moments they will rush to the nearest tree or fence or building, and commence to scratch their heads. They appear to be crazy with pain. They will scratch and rub so hard that they tear the skin, rub the hair off in large patches and even tear their eyes out. The head and neck swell and bloat, but no other part. The inside of the mouth swells, the eyes swell shut, and the animal appears perfectly crazy in their desire to scratch. One fine cow that died to-day was cut open and dissected, but nothing could be found out of order in any respect. In an hour and a half after the disease was noticed in her, she stopped her ravings and tumbled over dead. She never kicked or stirred a muscle after falling. Some of the neighbors lay the blame to the fruit or berries of the wild man-root. If you can tell us the cause, and give us a remedy through the columns of the RURAL PRESS, it will be thankfully received.—C. C. DRAKE, JR., HORACE DRAKE, Rohnerville, Humboldt Co., Cal.

The disease as described has the outward marks of the "mad itch," which was first noticed in the Mississippi and its tributaries, but whether it is the same thing or not we cannot certainly tell. We should judge that the fruit of the "man-root" was not at fault, because it is so common in some parts of the State that had it this evil effect it would have been noticed long ago. Our correspondent says that a dissection of the dead animal did not show anything out of order. If it had been "mad itch," as known in the Western States, there should have been decided appearances of trouble in the manufolds, or third stomach, as it is sometimes called. The "mad itch" proper results from a gathering of food in indigestible and immovable masses in the manufolds. The appearance is sometimes called impact. In the Mississippi valley it has been most commonly met with where cattle have followed hogs on green cornstalks. The hogs chew the green stalk, extract the moisture and the cattle greedily eat the refuse, which being dry, impacts in the third stomach as described. The symptoms of the disease are a wildness of the eyes, and by rubbing the nose and head against any object near them, as trees or fences. This is so violently done that they tear the skin horribly. The disease is primarily of the stomach, but affects the brain and head generally.

Although we cannot certainly determine that the cases described by our correspondent are the "mad itch," because we cannot tell whether he pursued his investigations to the stomach or not, we cannot do better perhaps than describe a treatment for "mad itch," which may be valuable to have in mind in case it occurs. Authorities prescribe bleeding in order to reduce any fever or to prevent it. After this a dose of physic is given to evacuate the intestines beyond the place of obstruction in the manufolds, and by its action upon them to induce them to return to healthy functions. The best purgative is epsom salts, about one pound to a dose with one-eighth of an ounce of ginger added. This, dissolved in water, may be administered

by means of a small horn, or the pipe of the stomach pump introduced half way down the gullet and the liquid slowly pumped in. By operating carefully, the liquid may pass gently to the fourth stomach and finally excite action in the intestines. It is necessary to do something to loosen up the impaction of food in the manufolds, and this may be done by drenching, with an almost continual stream of warm water, administered through the horn or with the stomach pump. This water, as it passes through the canal of the esophagus, washes the lower edges of the manufolds as they hang down, and the food packed above between them is gradually moistened, washed along by the drenching and the stomach returns to its normal condition. It is well to add a little epsom salts and ginger to the water used in drenching, but all heating tonics, etc., should be avoided. The animal may be allowed soft and almost fluid mashies, and water or thin gruel as much as desired.

Hungarian Prune.

EDITORS PRESS:—In your last issue you ask the nomenclature of the fruit known in the market as Hungarian prune. I consider it the "English Pond's seedling," of Downing, and have never been able to distinguish it from that fruit. It has also *Grosse prune d'Agen* for a synonym. In my catalogue it is described as follows: "Very large, bright red, with a thin bloom, juicy and sweet. Its productiveness, large size and bright color make it profitable for market."—JOHN ROCK, San Jose.

Thanks; we hope every reader who has a point on any subject which comes up in the PRESS will give it to us. Our columns will thus be enriched by the concentration of universal knowledge and experience.

Postponement of Agricultural Lectures.

EDITORS PRESS:—Please announce that, in consequence of the failure of a sufficient number of students to present themselves at this time for the proposed lecture courses on special cultures, the beginning of these courses will be postponed until after the mid-term recess in October. More detailed announcement will be made in the next issue of your paper.—E. W. HILGARD, College of Agriculture, Berkeley, Cal.

A Plea for Our Agents.

We believe that the agents whom we send out in various directions to present the claims of the PRESS, and to make collections of monies due us, are trustworthy gentlemen. At all events, we will not knowingly send out a man who is not such. The work of an agent is not pastime. It is a life of unrest, oftentimes of continued exposure to burning sun and stifling dust or driving storm. Many times he has to make a long turn out of his way to reach a single subscriber, and we ask that whenever it is possible he may receive the money which he seeks. Unless necessity compels it, do not put him off; but, when his credentials are proper, honor his claim. We do not wish our patrons to wait for the coming of the collector, but to send us the money as soon as they can do so, because the early use of the coin may help us along greatly in maintaining the standard of our paper. But when the collector comes before the remittance is made, please let him have it.

Our agents are of great value to us and to our readers, not alone in extending our subscription list and thus furnishing us the materials for strengthening and improving our paper. They help us greatly in keeping our journal abreast of the industrial progress which is being made in the different regions of the coast. We could not afford to send them out merely as correspondents, and yet they do splendid work in this line and send us budgets of fresh facts, new and successful practices, etc., which the editor on his lonely perch might never know without them.

We invite all our readers to be frank with our agents. Tell them what you like and what you do not like, what you know and what you need to know. You may tell them the paper might be better if the editor had more brains. You may criticize freely; in fact, we invite you to do so. If you think the paper deserves it, criticize it so severely that the agent's report will make the editor go home and spank the baby to conceal his mortification—but do not put off the agent without the money if you can help it.

ON FILE.—"Fixing the Rate of Interest," J. M. H.; "Sick Horse," etc., W. H. B.; "Shrinkage of Apricots," C. T. S.; "Allie's Revenge," W. W.; "Proposed Constitutional Amendments," J. H.; "Tomato Catsup," C. S. C.; "Bernuda Grass," G. R.; "The Dairy," P.

Proposed System of Irrigation and Cultivation.

"Prove all things; hold fast that which is good," is a biblical injunction, and it has a certain application to agricultural practice. Although we do not believe in wild experimentation at the risk of losing what has been found to be practical and satisfactory, it is well enough to have an eye upon all new things which are proposed, and to measure them by the judgment, because they sometimes prove suggestive if not in themselves valuable. For the purpose of informing our readers concerning the things which are proposed for their consideration, we give a showing upon this page of a proposed system of combining cultivation and irrigation in the culture of small plants, as, for example, strawberries, onions, and the root crops, as carrots, beets, etc., where they are grown for market purposes. We do this without any endorsement of the practicability of the process, because of that we are not sure; but we advance it that those interested in such cultures may study its adaptations.

It is proposed by Dr. M. H. Winebrener, of 205 W. Madison street, Chicago, to construct a machine like that shown in the engraving, which shall act as a seed drill, cultivator and distributor of water. The apparatus is much longer than one would judge from the engraving, and is intended to be from 30 to 40 yards in length of axle. This axle is a wrought iron tube from four to six inches in diameter. The sagging or bending of this tube is guarded against by the bracing shown in the cut. The under side of this pipe is perforated to cause an equal distribution of water over the ground. One end of the pipe is attached by a coupling to a water plug, around which, as a fixed center, the pipe revolves, and from which it receives a constant supply of water as fast as it issues from the sprinklers. The planting is done in series of circles, and in this manner a mathematical precision is attained in drilling in the seeds and the subsequent cultivation of the plants. After irrigating or cultivating one acre, by unscrewing the coupling and hitching another horse in front of the inner wheel, the machine may be drawn and shifted to the next plug of the adjoining acre. The water is supplied to the plugs through wooden pipe, laid underground, from a source having a natural head, or by horse or steam power. The ground lost by this system in a plat of ground containing nine circular acres, would be about one-fourth of an acre, which would be cultivated in the ordinary way. The urn, shown on the pipe, serves as a receptacle for holding fertilizers or insect poison, to be applied either in a state of solution or suspension. For cultivating, a set of teeth, hoes or shovels are attached to the pipe by a hinged collar and set screw, in order to clean out a sufficient number of rows; and at the end of one or more revolutions of the apparatus, are shifted to the next series of rows, and so on. For pulverizing, or reducing the soil exceedingly fine, preparatory to sowing small seeds, fine steel rakes may be attached. Any of the standard seed drills may be adapted to the drilling in of the seed. The ground not being trampled upon is left light, spongy and well aerated; the weeds will be less liable to root again after being disturbed; the tillings or hockings can be doubled or trebled, as one horse can do the work of many men at much less expense. The attachment of the chains to hooks, one above and one below the pipe, prevent any swinging tendency or torsional strain upon the pipe, either in cultivation or transportation. The weight of an acre machine, with a four-inch pipe, would be about 1,200 pounds empty, and 1,800 pounds when filled with water. There is no mechanical difficulty, therefore, in irrigating by this device one acre of land with water equal

to one inch of rain in one hour, or nine acres in one day.

Dr. Winebrener, who proposes this system of cultivation and has patented it, would doubtless be pleased to hear from any one who deems the system worthy of practical application in this State or elsewhere.

The Mechanics' Institute Fair.

The great exhibition by the Mechanic's Institute is now under full progress at the Pavilion in this city. The various departments of art and industry have contributed their quotas, and the display of varied articles wins high praise from visitors. Almost every one will find something in the acres of exhibit, which will win his interest or her admiration. The fair is well planned for those of vigorous appetite, who joy to make an optical meal of ingenious and ponderous machinery, natural productions and curiosities, or the gems of merchandise and manufacturing. There is also abundant fabulum for the daintier appetites which are tickled by full draughts of instrumental music, the art of the picture gallery or the improved nature of the garden. In short, the Fair seems well furnished at all points. Even the department of polite literature is not forgotten, as the bright *Fair Daily*, published by Dewey & Co., and edited by the brilliant and versatile literary Carpenter from Ukiah, will testify. On other

Facts and Questions about the Phylloxera.

EDITORS PRESS:—The enclosed communication from Mr. Henry G. Hanks was lately received by the Governor, and by him referred to me for action thereon. The session of the University having begun, I am unable to do what would doubtless be the most certain mode of getting the desired information, namely, to go out among the vine growers and see for myself. I have repeatedly tried, both by private letters and public calls, to obtain current information on this important subject; but the vine growers have, as a rule, failed to respond, whether from indifference or from an unwillingness to look the matter in the face, or finally from a fear that the knowledge of the existence of the phylloxera in their neighborhood might injure the sale of their lands and wines.

It seems to me that the time for the abandonment of this short-sighted policy has come, when it is currently reported that the business failure of a large and once prosperous association is mainly due to the ravages of the phylloxera. If the facts are not now fairly stated, and the doing nothing policy replaced by an intelligent consideration of the possible preventives and remedies, the evil will be magnified beyond its real proportions by the tongue of rumor, and whatever damage can result therefrom to the vine growers will be correspondingly increased.

I hope the questions of the Duchess of Fitz-James will receive attention and answer from the many intelligent gentlemen able to furnish

of great interest to our State. I have since had an interview with the Minister of Agriculture, and Eugene Tisserand, Inspector-General of Agriculture, both of whom are very much interested in this subject, who will furnish all the publications of the French government, and who desire such information as our State can furnish. I have thought if a committee of wine growers of California would take this matter in hand, much advantage to the State might be the result. The same gentlemen might return answers to the questions which the Duchess of Fitz-James has asked, and which are inclosed in her letter.

I learn from the Minister of Agriculture that none of the insecticides have proved effective, and that the system of "over watering" the vines is the best remedy yet tried. This plan, as I understand it, consists in irrigating the soil to that extent that the roots of the vines and the soil around them remains saturated for 24 hours. I have no doubt the publications promised will give all information. I wish the magnificent publications of Mr. Edward Bosqui, of San Francisco, might be sent to the French government through the Minister of Agriculture. I am certain they would be appreciated. —HENRY G. HANKS, Exposition, Paris, France

Letter of the Duchess of Fitz-James.

The following extracts from the letter of the Duchess of Fitz-James, referred to above, will be found of interest in this connection: "As regards the chemical antidotes, I have examined and tried a great many processes, and have had no satisfaction out of any except the product of M. Tichet, chemist, 54 Rue de Lagny, Vincennes. I think Mr. Hanks might get from him some very useful information, albeit M. Tichet's practice in the destruction of the insect is a great deal better than his explanations. He has for seven years maintained 14 hectares against the phylloxera. I would use his process if I still had my vines. But having lost them I prefer to plant the resisting varieties."

What the product of M. Tichet is does not appear from the letter of the Duchess. The following are the questions upon which the lady asks light from California:

1. Does the phylloxera attack every sort and species of vine in California?
2. What varieties are most commonly grown?
3. What varieties stand best against the phylloxera?
4. What is to be believed about the power of resistance of the following species, which thrive well in France as yet in the most infested districts: Yaquez, Herbemont, Rulander, Taylor, Cunningham; or the following on which opinions vary: Clinton, Concord, Morton's Virginia, Eumelan?

I possess about 700,000 vines of the above-mentioned species, aged three, two, and one year. I know in my neighborhood a few Yaquez and Herbemonts, aged 16 years and prosperous. —DUCHESS OF FITZ-JAMES, St. Benezet, par St. Gilles, Gard, France.

The matter contained in these documents is of interest, although there is nothing very novel in them. It would be of value to all to collect facts concerning the real prevalence of phylloxera in this State. The search for hardy vines is wise, and the experience of the Duchess may be of advantage to us hereafter. California cannot tell her much about the vines she names. They have not been tried to any extent here, because growers have not felt the need of insect-proof vines except in a restricted region of the State. We believe from our investigations and inquiry that the insect is at present confined to comparatively narrow territory, and it is pretty generally understood where that is located. It would be far better to have the subject generally understood than to cover it up, but one reason why the insect does not show up more generally is that it does not generally exist as yet. Our offer to make free microscopical examination of suspected vines and report results in confidence to the owners, as described in our issue of July 20th, is still open.

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DR. WINEBRENER'S COMBINED SEED PLANTER, CULTIVATOR AND IRRIGATOR

pages in this issue of the PRESS, will be found the able addresses delivered at the formal opening of the Fair by President Scott and the orator, Mr. Winans, and a stirring poem, written for the occasion by a well-known contributor of the PRESS.

During the continuance of the Mechanics' Fair will be the very best time for residents of the country to visit the city, for then they will be able to see clearly what other workers in life have been achieving, while they have been engrossed in their daily avocations. They will recognize how much more there is in the world than they have given to it, and will be liberalized, enlarged and stimulated to an effort to keep pace with the d careful progression of this age of marvels, and to add something from their store, be it little or much, to that progression.

To the most casual observer who wanders through the vast pavilion, and scans the fruits of genius, the mechanical skill, the arts and scenes here illustrated, the spectacle must be of interest. So the more thoughtful lessons of value, not soon to be forgotten, will be learned; and we shall one and all of us be benefited in a greater or less degree by careful study of the display set before us to pass judgment on.

MR. H. E. HALLETT, corresponding agent of the PRESS, will visit Stanislaus county during the next few weeks.

THE canker worm has been unusually severe this season upon orchards in northern Illinois.

the desired information, which is fully as much needed for California as for France. Whatever replies may be given, either through the columns of your paper, or directly to this department by letter, will be duly recorded and finally transmitted to the Duchess and to the French minister of agriculture, with credit to the several authors.

It is scarcely necessary to repeat here, at this time, my often-given assurance that all questions relating to this or any other agricultural subject, transmitted to me with the needful information in detail, will receive, as heretofore, prompt attention and investigation without charge, provided only that the question is not of purely individual interest. One question deserving immediate attention is the reported fact of the existence, within the districts invaded by the phylloxera, of particular tracts of soil in which the insect does not seem to be able to do any material injury, even to the Mission grape. If this is so, then the investigation of the peculiarities of such soil is of the most direct pecuniary interest to every vine-grower. —E. W. HILGARD, College of Agriculture, Berkeley, Cal.

Letter from Commissioner Hanks.

To His Excellency, the Governor of the State of California—Sir:—Since I have been in Paris, I have taken considerable pains to obtain information relating to the ravages of the phylloxera, and to what has been done in France to check them. I find at the exposition a number of the so-called insecticides, which I have investigated as far as my limited time would allow. In making inquiry, I have formed the acquaintance of parties who are deeply interested in this subject. I inclose a letter from the Duchess of Fitz-James, who is an extensive wine grower, and who will furnish information which may be

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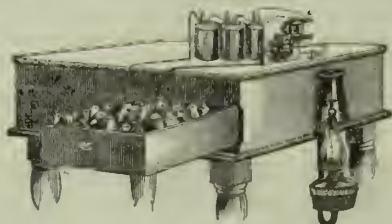
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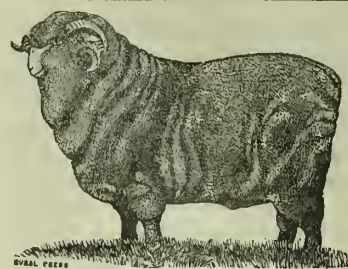
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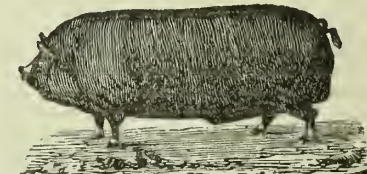
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The Mining Debris Trial.

(Continued from Last Week.)

Louis Janin, mining engineer, and resident of California since 1861, thought the only proper way to work these mines was by the hydraulic process. Observation had led him to believe that the inhabitants of the mines in this State were more prosperous, generally, than in any other mining district with which he was acquainted. He believed that the stoppage of the mines would not prevent the flow of sediment. Thought Mr. Allard's estimates of solid matter, and amount of water passing the railroad bridge, wrong. Prof. Thos. Price, chemist and engineer, estimated the total yield of gold, since 1849, at \$1,200,000,000. During late years, the yield has been about 19,000,000 annually. Hydraulic mines would produce about \$14,000,000 this year. Witness said there was no poison contained in the debris on Bear river lands, and thought the water flowing there was good for irrigating land. Had visited the land of plaintiff, and saw no signs of vegetation having been poisoned. He believed hydraulic mining had been profitable, but some claims had not paid yet, owing to the great expense in opening them.

A. F. Williams, of Oakland, had been engaged in mining about 27 years. He visited the land owned by plaintiff in September, 1876, and twice within the past month. He went to view the land and crops. Several gentlemen were with him. At his last visit did not notice much difference between the condition of the land in 1876 and now. Several points on the land were designated by witness, where they had dug down and measured the sediment, which he stated to be from three inches to one and one-half or two feet in depth. He could not see any material difference in the growth of weeds on the land covered by sediment and that not covered. On ground covered the deepest with sediment, they saw a light crop of barley. In a field, south and west of Keyes' house, he found a crop of corn growing on ground covered with sediment about one foot deep. There were many well-defined ears on the stalks. The corn was here produced and shown to the court; one stalk was measured, and found to be nine feet six inches long, and the ears, two in number, had the appearance of well-defined ears in the milk. Witness said these specimens were a fair sample of the corn in that field. He went up to the bridge, and saw a field of corn there, on ground that was covered with sediment, about three feet deep. That corn was as good as any he had seen. He thought that if the mines were stopped, the debris would continue to flow. He said if the mines continued work, the dams or dumps would be increased in size, and afford more protection by keeping the tailings back. Witness, on cross-examination, said he owned interests in several hydraulic mines—one located at Smartsville. Said he did not think the mine was filling up the river, but some fine sediment might come down this far. He had not furnished witnesses money in this case, and he came as a witness by subpoena. He did not go down to Keyes' land, last Sunday, to make his damages look light. He went to gain information, and see the growing crops, that he could testify intelligently.

Wm. Campbell, of Lake Tahoe, formerly resident of Bear river, near Johnson's crossing, visited the land of plaintiff, last Sunday. The land was covered by sediment, to the depth of 12 to 18 inches. Saw growing crops on this sedimentary land. Did not see any grain or corn growing on other than sedimentary land. He considered the corn, potato, and bean crops good. The corn here exhibited is a fair sample. Had not seen any that looked better. Considered the land worth double now, for growing corn, potatoes, and beans, which it was before being covered with sediment. Did not know if it was any better for small grain or not. The corn, potatoes, beans, and fruit, growing there, were as good as in other places. He saw a field of corn, just up, which looked well. Did not think a man would plant crops, knowing it would not produce.

W. A. Findley, David N. Jones, J. W. Layman, E. J. Tompkins, Josiah Dodge, Joseph Perrine, George W. Smith, Lewis Posey, A. M. Pitts and James McCarger, all gave testimony pointing strongly to the fact that land was improved rather than injured by the sediment.

J. P. Pierce, of Santa Clara, had formerly lived at Smartsville about nine years. Witness said the hydraulic mines at Smartsville had averaged from \$50,000 to \$300,000 per acre. There were about 2,000 inhabitants at these and vicinity, who depended upon the work and product of the mines for a living. The yield of gold at these mines, Smartsville and Timbuctoo, had been as much as \$12,000,000, and they were no more than half worked out now. Witness said his company at Smartsville was a member of the organization to contest this suit, and had paid an assessment of \$1,300 to the President of the organization. The assessment was levied on the assessed valuation of their property.

He gave a description of their ditch and mines at Smartsville and their farm of 1,700 acres near there, and said they irrigated about 300 acres of it with water from their ditch. It would not pay to work their claims by drifting. Jasper N. Muns and L. Harding testified to the usefulness of sediment on farm lands.

A. B. Brady, among other things, said that to stop mining in Nevada county would almost

entirely desolate the present thriving towns.

James O'Brien, miner and farmer, testified that he was a member of the Hydraulic Miners' Association, formed two years ago. His company paid money to the Association. Over 100 claims paid in the same way. He did not consider the fund a means for corruption, but for mutual protection. Ground that gave but two cents per cubic yard had been worked by him on a paying basis. His income from his hydraulic claims had been as much as \$30,000 per annum.

Richard Abby, President of the Spring Valley Water and Mining Company, testified:

They had 110 men employed in various ways. He gave the working expenses of their mines, yield of gold, amount paid in by stockholders, and said they had declared one dividend of \$200,000, and had declared one this year of \$60,000. Could not say how much had been declared in all dividends. Witness said he was a stockholder in the Milton mine, located on San Joaquin ridge. That mine had also declared large dividends.

T. W. Balch, the next witness, said he was the owner of the Little York mining claims. Bought them from an English company over one year ago. Said in working all their claims they dumped the tailings on land owned by them. When he came in possession of them, most of the top dirt had been washed off. On cross-question, he said he paid \$100,000 for the claims.

A large number of deeds and patents to land and claims were put in evidence. Geo. S. Powell, Superintendent of the Bird's-eye claims, estimated the gold taken out of these claims at between \$30,000,000 and \$40,000,000. The balance of his evidence was corroborative.

The evidence of Wm. Roblin, J. L. Gould, Hiram Searls, Thomas Patterson, and of two mining engineers, E. C. Wren and Natone Westcott, was mainly corroborative. The last-named said that 20,000 acres was the most that could be overworked under any circumstances in Bear River valley. Said the farming population of the valley was no more than 75 or 100. Was of the opinion that a good system of levees would protect the land at all times.

August 9th the defendants closed their evidence.

Joseph Johnson, S. D. Woods, Frank Kirshner, B. F. Dan, W. L. Ousley, B. D. Gray, David Hevilbart, A. K. Baker and J. D. Lewis were called by plaintiffs to give rebuttal testimony, most of it concerning the effects of debris on farming lands.

Thomas B. Brewer and J. H. Keyes were each recalled to correct some points in their previous evidence, when counsel for plaintiff said their evidence was all in.

Judge Keyser adjourned the Court for the term. The evidence is to be printed. In about 60 days from adjournment the case will be argued.

Mr. William Tyson.

(Written for the Press by C. H. S.)

One after another those hardy and enterprising men who helped to found our State are passing from our midst. Their lives of toil and wonderful adventure along the cloudy Sierras and in forgotten mining camps, and over plains now smiling with golden harvests, had a freshness and a sense of delight which few of their children can ever know. Everything concerning our pioneers is of such interest, that we narrate a few events in the life of Wm. Tyson, who died at his residence at Niles, on the 1st of last July.

The surroundings of a man's childhood do much to form his character, and it is pleasant to know that Mr. Tyson's earlier life was passed among historic scenes. In the extreme northwestern corner of England, separated from Scotland by the Cheviot hills, lies the county of Cumberland, whose county-town is Carlisle. Once forming a part of the kingdom of Northumberland, it became, later, the scene of border life and frontier adventure in the days of Percy and of the Scottish marches. Peopled by a brave and hardy race of miners, mountaineers and farmers, the Saxons mingled with the Normans less here than elsewhere, and the blue eyes and brown hair of the Saxons are often seen.

The Tyson family was one of worth and respectability in the rugged portion of Cumberland. They possessed the old fair-haired Saxon type, and both sons and daughters were remarkable, even in a sterner age, for bodily strength and health. William was one of eight children—five boys and three girls—and was born on the fifth of December, 1820. Dairying was the family occupation, but as William grew up he began to show a painstaking industry and a taste for the use of tools, and his mother dying when he was 13, he was apprenticed to the carpenter's trade, after the thorough way of those good old times, when trades were well learned. The earnest lad was always busy and patient, going on from step to step until he became a good house carpenter, joiner and wagon-maker before he was 21. In 1841, at the town of Maryport, he became an Odd Fellow, and ever after kept up his connection with that Order.

This was the time when much interest was felt in America among the middle and yeomanry classes. So, in the fall of 1841, following out a long-cherished plan, he came to the United States, and going West, settled in Columbus City, Lonsa county, Iowa. In 1846 he moved

to the town of Grand View, and pursued his trade of wagon-making. The following year he married Emmeline Morrison, and removed to the little town of Port Louisa, where he remained until the gold excitement in California.

On the 15th of March, 1849, Mr. Tyson, his wife and infant son, with his brother-in-law, Wm. Morrison, started for California. By the 6th of May a company of 19 wagons had been organized, for the sake of comfort and protection; but after traveling together four days, Mr. Tyson and two others left the company, and continued in advance, being able to travel faster. Game was abundant and easily obtained, Mr. Tyson being the crack shot of the party. He shot the first buffalo seen, and afterwards, whilst near Donner lake, killed five pheasants at one shot. The party made a new trail along the Truckee, and it is remembered with some amusement that they crossed that river 27 times in one day. They saw the sad remembrances of the Donner party, and soon after began the wearisome ascent of the Sierra Nevada, using 10 or 12 pairs of oxen to pull each wagon up, and letting them down on the western slope with heavy ropes. The 12th of September brought them safely to Sacramento, the only sad event of the journey having been the death of their child, William Perry Tyson.

The early pioneers did not loaf. The Tysons, young and hopeful, went to Haugtown (now called Placerville) in El Dorado county, and opened a boarding-house. But in three weeks Mr. Tyson and his brother-in-law bought a claim for \$300, took out over \$1,000, sold the claim, and began work in loose diggings which paid \$16 per day. Hearing of better places they started to find them, but the floods prevented their going beyond Georgetown, and they went to Sacramento for a load of groceries to start a store, but on their return the mining camp was almost deserted. With his capital tied up in heavy groceries Mr. Tyson's energy did not fail him, and, with the aid of his faithful wife, he packed his goods to Bird's Valley, and again kept boarding-house.

In the fall of 1850, whilst in Sacramento, he received a letter from his brother-in-law, Perry Morrison, then in San Jose valley, which decided him to realize a long desire, and become a farmer. Closing up his business he came to the Mission San Jose, and bought a settler's claim to a beautiful tract near the Alameda creek. Here he brought his family; here he lived a quiet, useful life, universally respected and loved for his genial temper and uprightness. His boys and girls began to cluster around him, and the cares of life perplexed him, but he was always the same cheerful philosopher. His friends wanted him to run for office, but he always refused. As an instance of his probity we may mention the fact that when the county treasury at Alvarado was robbed, two of the four bondsmen failed to appear; but Mr. Tyson and his brother-in-law, the remaining two bondsmen, paid the county's claims without question.

In 1872 Mr. Tyson and his loving wife celebrated their silver wedding, and it was a great occasion in the neighborhood. In the same year his oldest son, William Henry, married Miss Jennie Bonner, an old schoolmate. In 1874 his oldest daughter, Clara, married Mr. Martenstein, of San Francisco, and they have one child. In all, Mr. Tyson left five sons and three daughters living.

Mr. Tyson loved home so well that he traveled but little. He went over the northern counties, however, with the publishers of the RURAL and others this spring, and his mining stories, jokes and wise sayings were a treat to us all. His years sat lightly, and none of us dreamed of his sudden departure. He was especially sorry that he could not see A. J. Loomis, of Red Bluff, his old companion across the plains.

Upon the little mound where lies the man we loved, we can only lay a leaf of memory and of respect for his qualities as a friend, a father, a citizen. May peace rest upon the house of mourning, and may his sons be manly and noble, as was their father. Such quiet, untroubled lives as his are the best hope of the nation.

WEEVIL ON LEAVES.—*Psyche*, the organ of the Cambridge Entomological Club, notes the recent introduction into the United States, of a weevil, which devours the foliage of many beautiful plants, and suggests to florists, who have been troubled by it, that it will be for their advantage to search at this time of the year, in the flower-pots, and in all waste soil about their hot-houses, for the larvæ and pupæ of these pests. The larvæ, which feed upon rootlets, are now pupating, and the destruction of every individual prevents the laying of a large number of eggs during the coming season.

NATIVE FLOWERS AND FERNS.—The continuation of Prang's series of native flowers and ferns of the United States, illustrated with chromolithographs and text by Prof. Thomas Meehan, is worthy of the position accorded the work on the appearance of the first part. Five parts have thus far been issued, and the work is plainly shown to be unique and popular in design, and most praiseworthy in execution of both text and plates.

Woodward's Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a boa-constrictor have just been added. New stars are constantly engaged for the Pavilion exercises. Rates of admission as usual.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

(FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.)

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING AUGUST 6TH, 1878.

STEAM ENGINES—George E. Dow, S. F.
BALL TARGETS—Horace P. Fletcher, S. F.
PUMPS—Eugene Hawkes, San Diego, Cal.
WAGON JACKS—James B. Newland, Sacramento.
WIRE ROPE WAYS—Ambrose Blatchley, Kernville, Cal.
VEHICLE TORMION SPRINGS—Frank M. Chapin and Joshua Gersbacher, Cuffey's Cove, Cal.

TRADE-MARKS.

COFFEES AND SPICES—John Prusso, Oakland, Cal.

The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

Amador County.

W. G. Alban, canvasser and correspondent for the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, two of the most readable papers for miners, mechanics and farmers in the State, has contributed his quota to the great volume of the favorable reports of the grand resources, mineral and agricultural, of the sparsely-settled county of Amador.—*Los Angeles City News*, Aug. 10th.

We are glad that Dr. Alban's letters are favorably received by our friends in Amador county. The county is one well worthy the attention of capitalists and home makers, and we are glad to introduce it to our readers.

Dr. Alban is now going to Virginia City and other parts of Nevada in the interest of our publications, and we expect he will gain much valuable information on his way. We bespeak him a cordial reception.

OCEAN VILLA, SANTA CRUZ.—Mr. Geo. H. Bliss, Proprietor of this flourishing watering place, offers large, well furnished rooms, single or in suites, to visitors. Also cottages for families that desire them. Grounds large, romantic and pleasant. Situated forty feet above tide water, having a beautiful view of the Bay, Ocean, City and Mountains. Premises extend to river's edge, affording rare facilities for boating, bathing and fishing. No pains spared to please guests. Address, P. O. Box 106, Santa Cruz, Cal.

POPULAR MUSIC.—Make your houses merry and popular with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 106 Kearny Street. THE RURAL PRESS can offer to introduce you there.

HEARING RESTORED.—Great invention by one who was deaf for 20 years. Send stamp for particulars. JNO. GARMORE, Lock-Box 905, Covington, Ky.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, August 21st, 1878.

There is but little new this week in the Grain trade. Large amounts are still arriving; in fact it is impossible to find cars enough to move that which presents itself. Fortunately the prospect of continued clear skies for some weeks to come, promises to house all the Grain before the storms come.

There has been a little tendency to fluctuate in the English markets, but a gain of a penny on Friday last has been lost again.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday.....	10s	2d@10s	5d	10s	5d@10s	9d
Friday.....	10s	2d@10s	7d	10s	6d@10s	10d
Saturday.....	10s	3d@10s	7d	10s	6d@10s	10d
Monday.....	10s	3d@10s	7d	10s	6d@10s	10d
Tuesday.....	10s	3d@10s	6d	10s	5d@10s	9d
Wednesday.....	10s	3d@10s	6d	10s	5d@10s	9d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1876.....	9s	3d@9s	6d	9s	6d@10s	—
1877.....	12s	—@12s	4d	12s	3d@13s	—
1878.....	10s	3d@10s	6d	10s	5d@10s	9d

The Foreign Review.

LONDON, August 20th.—*The Mark Lane Express* says: Considerable rain fell throughout the kingdom the past week, and harvest operations were seriously retarded thereby. A fair quantity of Wheat was sown, but very little progress was made with Barley, wet weather having impeded threshing. Samples of new

Wheat were not numerous. Shriveled grains were present to a greater or less extent in all the samples. The crop, however, is not a failure, as the yield promises to be better than in the three preceding years. Scotch advices report Wheat to be the best of white crops, and more forward than usual. Barley was prevented from filling out by drouth, although the grain in some cases is said to be fine. Having been almost exclusively engaged in the fields, farmers have offered very little Wheat; but the light offerings and the unsettled weather had their effect on prices, which were well maintained, and there was an increased demand for Spring American, for which there was a further advance of 1s per quarter. Although recent shipments from Atlantic ports have undoubtedly been large, their depressing effect upon trade has been minimized by the short stocks held by millers and a statement from trustworthy sources that the crop of Spring Wheat, in many sections of the United States, has suffered severely from heavy rain, followed by a fierce drouth. The demand for Russian sorts was comparatively light, and a good deal of dissatisfaction was caused by the heated and unsalable condition of the most recent shipments.

Freights and Charters.

The freight market, says the *Call*, continues very dull. A large quantity of tonnage is seeking engagement, and shippers are well supplied with room for present requirements. Wooden ships can be had for grain to Liverpool at 40s and iron ones at 45s. There are now in port 70,772 tons shipping engaged for Wheat, 64,459 disengaged and 14,475 tons loading general merchandise. On the way to this port, so far as known, 163,000 tons. The bark *Ocean Rover*, 548 tons, takes Wheat to Cork at £2 5s. The bark *Fresno*, 1,245 tons, takes Wheat to Cork, owner's account. The ship *Glindarnel*, 1,761 tons, was under charter prior to arrival, for Wheat to Liverpool, at £2 12s 6d.

Eastern Crop Reports and Markets.

CHICAGO, Aug. 15th.—The *Daily Commercial Bulletin* says that the winter wheat crop of the Western States, just harvested, was unusually large and of excellent quality. It is safe to say that in Indiana, Ohio, Michigan, Illinois, Wisconsin, Missouri, Nebraska, Kansas and Iowa, the aggregate acreage is 9,750,000, and the total production 190,000,000 bushels, against 150,000,000 last year, or an increase of 40,000,000 bushels.

ST. PAUL, Minn., Aug. 15th.—A special dispatch to the *Pioneer Press* reports threshing generally begun. Indications are of a larger yield than expected, except on the extreme southern border and some river counties. A yield per acre of from 16 to 25 bushels is reported. All of it is of poor quality and will grade below No. 1.

NEW YORK, Aug. 17th.—At length we begin to get something like correct views of the wheat crop. The best authorities now make it quite equal to early estimates of the Agricultural Bureau, or 400,000,000 bushels, against 325,000,000 last year, though there is no doubt that the spring Wheat crop will be, for the most part, of inferior quality. New winter wheat is arriving freely, and shipments to the continent during the week have been large, particularly to France. Prices advanced 2@3c per bushel early in the week, but an improvement was not sustained, the market closing at \$1.12@1.14 for No. 2 Spring, and \$1.05@1.15 for Winter. For September and October delivery, \$1.03@1.05 is bid for No. 2 Spring, with \$1.10 asked. Corn has been in limited supply and prices have advanced to 47@50c for export grades. New Barley has been shown, but no sales are recorded. Flour has commanded rather higher prices, especially Minnesota brands and city ground.

CHICAGO, Aug. 17th.—The week's Wheat market has been decidedly firmer as to price, more active as to transactions, and in a more orderly state as to the relation of cash and options. Sales of September were 934@97c. Corn had a good and steady trade, with little excitement, and prices averaging higher. Sales of September, 383@39c. Oats were weak and easier, firming up at the close. September sold at 22@22c. Rye, 50@52c cash. Barley, new, \$1.13@1.17 cash. Provisions were irregular and unsettled. Prices averaged higher than last week, but closed with a heavy break of about 50c on Pork, and 25c on Lard. There seemed to be no special reason for this drop. Sales of September Pork, \$10@11; the lowest price to-day, the highest price Wednesday. Lard sold at \$7.25@7.82 for September.

Eastern Wool Markets.

Boston, Aug. 17th.—The only redeeming feature in the market this week was the demand for combed and delaine fleeces at steady and firm prices. All other kinds were exceedingly dull, and for clothing Wools generally the market has a decided tendency towards lower rates. It is now evident that prices paid in the interior were too high, and unless the demand improves it will be difficult to place early purchases at cost, and late purchases in Michigan, Ohio and Pennsylvania can only be turned over at a loss. Manufacturers appear as indifferent about supplies as at any time during the past six months. Sales comprise Ohio and Pennsylvania fleeces, No. 1X, XX and above, at 36c and 38c; Michigan No. 1 and XX, 34@36c; Wisconsin X, 32@35c; low fleeces and selected cotts 30@35c; combed and delaine, 38@45c; unwashed combed and delaine, 26@30c; Texas, 17@27c; Colorado, 20@25c; scoured, 33@35c; tub washed, 37c; super and X pulled, 30@39. California Wool is quiet, and sales light, com-

prising for the week only 185,000 pounds at 20@29c for Spring, and 16@18c for Fall. Total sales of domestic for the week, 1,245,400 pounds.

NEW YORK, Aug. 17th.—The Wool market has witnessed a fair inquiry during the week, but thus early in the season there is a noticeable feeling of weakness among holders of fine Wools, and the fact is daily becoming more evident that prices paid in the country were too high. This class is and has been slow of sale for nearly a year past, but it was generally believed that by this time the demand would show a material improvement. Such, however, has failed to be the case, as medium grades are still sought after and full rates are in every case obtained. The better grades of Spring California, being only in moderate supply and concentrated, are held with firmness, and it is generally believed that holders will find no difficulty in maintaining current rates. Oregon meets with considerable attention, and prices are well sustained at 24@25c as a basis. Texas, both Eastern and Western, fine fair sale, and recent quotations are well adhered to. Pulled Wools are in demand, and though the supply is ample, there is no great accumulation. Sales for the week comprise 125,000 lbs Fall California, ex David Crockett, at 14c; 37 bags scoured do, 56c; 29,000 lbs Spring do, 20@23c; 82 bags scoured do, 55c; 58,000 lbs Eastern Texas, 17@25c; 120,000 lbs Western do, 15@21c; 20,000 lbs domestic noils, 20@30c; 150 bags Colorado, 15@17c; 88,000 lbs X and above Ohio fleece, 36@39c; 8,000 lbs unwashed Western do, 23@26c; 19,000 lbs do combed and delaine, 45c; 14,000 lbs low combed, 37@40c; 1,000 lbs low scoured fleece, 45c; 10,000 lbs tub washed, 35@38c; 25 bags super pulled, 35c.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. July 31.	WEEK. Aug. 7.	WEEK. Aug. 14.	WEEK. Aug. 21.
Flour, quarter sacks..	96,334	37,623	33,746	64,333
Wheat, centals.....	215,274	322,937	388,612	300,173
Barley, centals.....	23,076	36,303	30,993	62,395
Beans, sacks.....	87	181	130	350
Corn, centals.....	759	188	559	556
Oats, centals.....	3,294	3,551	11,902	7,121
Potatoes, sacks.....	11,126	7,203	8,375	12,838
Onions, sacks.....	318	1,554	1,123	877
Wool, bales.....	7,133	475	2,755	2,519
Hops, bales.....	13			
Hay, bales.....	2,202	2,406	2,579	2,389

BAGS—The market remains in the hands of the ring, and the price is 12@13c. It is said that outside lots can sometimes be bought for less, but they must be picked up.

BARLEY—The prospect for Barley continues bright. The shortage in the Eastern crops is becoming more apparent. A Canadian trade circular says: "The deficiency in home-grown Barley in North America, in 1878, is so great that, making due allowance for the use of substitutes, Barley will require to be imported from Europe, the quantity, quality and cost of which imports will largely determine the price which will be paid for our crop here." In the local market, \$1 per cwt is now the lowest figure for good Feed. We note sales: 300 sks Chevalier, \$1.85; 127 Coast Feed, \$1.05; 113 do, \$1.02; and 200 dark Coast, 90c per cwt. The ship *M. P. Grace*, for New York, has on board 400 tons Barley. Considerable shipments are being made overland, 100 tons being loaded at Oakland wharf Tuesday.

BEANS—A few new Beans are coming in. A lot of 50 sks choice new Bayou sold at 6c, and 50 sks new Pink at 5c @ 1b. The stock of old is about exhausted and quotations are nominal.

CORN—Receipts are small and transactions ditto. Two hundred centals large White Eastern sold at \$2.40, and 150 yellow do at \$1.80 per cwt.

DAIRY PRODUCE—Choice Fresh Roll has advanced 2c on the pound, owing to the decreased receipts. Other dairy products are unchanged and the trade is devoid of news.

EGGS—Fresh California Eggs are now ruling at 37c. Some Eastern Eggs are coming in by express and selling at 27c@30c.

FEED—There is no change in prices. Hay is arriving freely and the feed dealers are filling up to their roofs. The market is steady at last week's prices.

FRUIT—Advices per Davis & Sutton from New York, August 10th, state that "the last years were mostly over-ripe; sales ranged at \$3 to \$5 per box. Plums are quoted at \$2@3.50 per box, and white Grapes at \$6@7 per case of 35@40 lbs." Local prices have changed considerably during the week, as may be learned by our list below.

HOPS—Nothing new yet here. Emmet Wells reports the New York market, for the week ending August 9th, as without "business of any account, quotations being nominal and prices unchanged."

OATS—The market is still firm, but quiet, and prices maintained. We note sales: 100 sks inferior at \$1.30; 230 good old Feed at \$1.55.

ONIONS—Good Onions from nearly all sources now fluctuate between 75c@1 per cwt, according to the immediate demand for each day. Shipments are being made to Mexico.

POTATOES—Potatoes are selling along at last week's prices, without much change from day to day.

VEGETABLES—Most Vegetables are cheapened. Canteloupes have met severe disasters. The supply some days has been far in excess,

and large quantities have been thrown into the bay. The rate rules from 50c to \$3 per case, according to the anxiety which a customer shows for the goods. Marrowfat Squash has fallen off more than one-half during the week. Watermelons are quite plenty and some sell as low as \$5 per hundred.

WHEAT—All Wheat which will pass as good shipping now commands \$1.72@1.75 per cwt. Milling is nominal at \$1.80, as millers are taking but little. There is a great deal of Wheat "off grade," and this rules from \$1.40 to \$1.60. We note sales: 23,600 cts Shipping at \$1.75; 2,500 cts at \$1.77; and 800 do pinched at \$1.42; 16,000 cts Shipping, \$1.76; 1,400 poor at \$1.62; 1 cwt at \$1.50 per cwt.

WOOL—Dealers report the market weak and quotations nominal. We note sales: 25,000 lbs Humboldt at 23c; 8,000 lbs Colusa seedy, fall clip, at 12c.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., August 21, 1878.

BEANS & PEAS.					
Bayo, cwt.....	5 75	6 00			
Butter, 1 lb.....	4 25	5 00			
Pea, 100 lb.....	4 50	5 00			
Red, 100 lb.....	5 00	5 00			
Pink, 100 lb.....	5 00	5 00			
Small White, 100 lb.....	4 50	5 00			
Lim, 100 lb.....	4 25	5 00			
Field Peas, 100 lb.....	1 10	1 00			
BROOM CORN.					
Old, 100 lb.....	3 40	7 00			
New, 100 lb.....	3 40	8 00			
CHEESE.					
California, 1 lb.....	4 00	4 40			
German, 1 lb.....	6 40	7 00			
DAIRY PRODUCE, ETC.					
BUTTER.					
Cal. Fresh Roll, lb.....	27 1/2	32 1/2			
Fancy Brand, 1 lb.....	30 1/2	32 1/2			
Pickled Roll, new, 1 lb.....	25 1/2	27 1/2			
Firkin, old, 1 lb.....	12 1/2	14 00			
Western Reserve, 1 lb.....	12 1/2	14 00			
New York, 1 lb.....	12 1/2	14 00			
CHEESE.					
Cal. Cheese, 1 lb.....	8 1/2	12 1/2			
Eastern, 1 lb.....	10 1/2	12 1/2			
N. Y. State, 1 lb.....	10 1/2	12 1/2			
Gilroy Factory, 1 lb.....	11 1/2	13 1/2			
EGGS.					
Cal. fresh, doz.....	37 1/2	40 00			
Ducks, 1 doz.....	27 1/2	30 00			
Oregon, 1 doz.....	27 1/2	30 00			
Eastern, 1 doz.....	18 1/2	22 00			
do Pickled, 1 doz.....	18 1/2	22 00			
FEED.					
Bran, ton.....	15 00	16 00			
Corn Meal, 42 lb.....	40 00	43 00			
Hay, 100 lb.....	7 00	14 00			
Middlings, 22 lb.....	22 00	25 00			
Oil Cake Meal, 34 lb.....	40 00	43 00			
Straw, bale, 25 lb.....	25 00	26 00			
FEED.					
Extra, 1 lb.....	5 25	5 75			
Superfine, 1 lb.....	4 25	4 50			
Graham, 1 lb.....	3 00	3 25			
FRESH MEAT.					
Beef, 1st quality, lb.....	5 1/2	6 1/2			
Second, 1 lb.....	4 1/2	5 1/2			
Third, 1 lb.....	3 1/2	4 1/2			
Mutton, 1 lb.....	4 1/2	5 1/2			
Spring Lamb, 1 lb.....	6 1/2	7 1/2			
Pork, undressed, 5 lb.....	5 1/2	6 1/2			
Dressed, 7 1/2 lb.....	7 1/2	8 1/2			
Veal, 6 lb.....	6 1/2	7 1/2			
Milk Calves, 8 lb.....	8 1/2	9 1/2			
do choice, 10 lb.....	10 1/2	11 1/2			
GRAIN, ETC.					
Barley, feed, cwt.....	10 00	10 00			
Brewing, 15 lb.....	15 00	15 00			
Chevalier, 1 lb.....	75 1/2	80 00			
Buckwheat, 1 lb.....	75 1/2	80 00			
Corn, White, 25 lb.....	25 00	25 00			
Yellow, 1 lb.....	95 1/2	100 00			
Small Round, 2 lb.....	20 00	20 00			
Oats, 25 lb.....	25 00	25 00			
Milling, 55 lb.....	55 1/2	60 00			
Barley, 1 lb.....	17 1/2	20 00			
Wheat, Shipping, 72 1/2 lb.....	72 1/2	75 00			
Milling, 1 lb.....	10 1/2	11 00			
Off Grades, 1 lb.....	10 1/2	11 00			
HIDES.					
Hides, dry, 13 lb.....	13 1/2	16 00			
Wet salted, 7 lb.....	7 1/2	9 00			
HONEY, ETC.					
Beeswax, 1 lb.....	30 1/2	31 00			
Honey in comb, 1 lb.....	11 1/2	12 00			
do No. 2, 8 lb.....	8 1/2	9 00			
Dark, 8 lb.....	8 1/2	9 00			
Strained, 5 lb.....	5 1/2	6 00			
HOPS.					
Oregon, 3 lb.....	3 00	5 00			
California, 4 lb.....	4 00	6 00			
Wash. Ter., 4 lb.....	4 00	6 00			
NUTS—Jobbing.					
Walnuts, Cal., 7 lb.....	7 00	8 00			
do Chile, 7 lb.....	7 00	8 00			
Almonds, hd sh lb.....	7 00	8 00			
Soft sh lb.....	14 1/2	16 00			
Brazil, 14 lb.....	14 1/2	16 00			
Pecans, 13 lb.....	13 1/2	14 00			

FRUITS AND VEGETABLES.

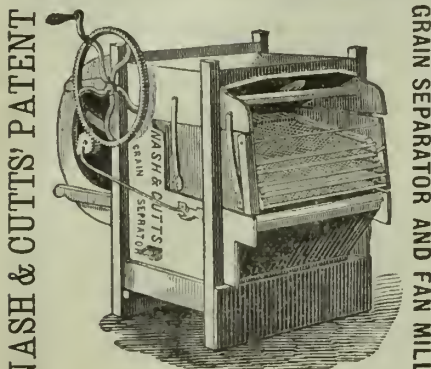
[WHOLESALE.]

WEDNESDAY M., August 21, 1878.

FRUIT MARKET.					
Apples, box.....	75 1/2	80 00			
do Cooking, 25 lb.....	25 1/2	30 00			
Bananas, bunch.....	—	—			
Bitterberries, ch st 1 lb.....	25 1/2	30 00			
Cocconuts, 100 lb.....	4 00	5 00			
Figs, 1 lb.....	4 1/2	5 00			
Grapes, com, bx.....	25 1/2	30 00			
Grapes, Must, do.....	60 1/2	70 00			
Limes, Mex, 6 lb.....	6 00	7 00			
do Cal, per ch 25 lb.....	8 1/2	10 00			
Lemons, Cal M.....	—	—			
Sicily, M.....	—	—			
Mangoes, 100 lb.....	4 00	5 00			
Oranges, Mex.....	—	—			
M.....	—	—			
Tahiti, 15 lb.....	15 00	20 00			
Cal.....	—	—			
Peaches, 25 lb.....	25 1/2	30 00			
Pears, 25 lb.....	25 1/2	30 00			
Pears, box.....	25 1/2	30 00			
do Bartlett, 75 lb.....	75 1/2	80 00			
Pineapples, doz.....	5 00	6 00			
Plums, 1 lb.....	1 1/2	2 00			
Prunes, 1 lb.....	3 1/2	4 00			
Raspberries, lb.....	8 1/2	10 00			
Strawberries, ch st 25 lb.....	25 1/2	30 00			
DRY FRUIT.					
Apples, lb.....	5 1/2	6 00			
do new.....	9 1/2	10 00			
Apricots, 15 lb.....	15 1/2	20 00			
Citron, 23 lb.....	23 1/2	24 00			
Dates, 9 lb.....	9 1/2	10 00			
Figs, Black, 4 lb.....	4 1/2	5 00			
White, 6 lb.....	6 1/2	7 00			
Peaches.....	8 1/2	10 00			
do pared.....	18 1/2	20 00			
Pears.....	6 1/2	7 00			
Plums.....	3 1/2	4 00			
Pitted.....	15 1/2	20 00			
Prunes, 1 lb.....	14 1/2	16 00			
Raisins, Cal, bx 1 lb.....	1 00	1 66			
do, Halves, 1 lb.....	1 50	2 00			
do, Quarters, 1 lb.....	1 50	2 50			
do, 1/2 lb.....	2 50	3 00			
Malaga, 2 1/2 lb.....	2 75	3 00			
Zante Currants, 8 lb.....	8 1/2	10 00			
VEGETABLES.					
Beets, cwt.....	50 1/2	55 00			
Beans, String, 1 lb.....	14 1/2	15 00			
Cabbage, 100 lb.....	40 1/2	45 00			
Canteloupes, case.....	50 1/2	55 00			
Carrots, cwt.....	40 1/2	45 00			
Cauliflower, doz.....	50 1/2	55 00			
Cucumbers, bx.....	40 1/2	45 00			
Garlic, New, lb.....	2 1/2	3 00			
Green Corn, doz.....	2 1/2	3 00			
Green Peas, 1 lb.....	1 1/2	2 00			
Lettuce, doz.....	10 1/2	11 00			
Parasips, lb.....	2 1/2	3 00			
Northwestern, 7 lb.....	7 1/2	8 00			
Rhubarb, 1 lb.....	1 1/2	2 00			
Squash, Marrow.....	7 1/2	8 00			
fat, tin.....	7 50	8 00			
Summer do, bx.....	25 1/2	30 00			
Tomato, 60 lb bx.....	15 1/2	25 00			
Turnips, cwt.....	50 1/2	55 00			

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THE BEST IS THE CHEAPEST.



THREE SIZES—Warranted to Clean from 60 to 200 bushels per hour, perfectly.

PRICES—No. 1, \$35; No. 2, \$45; No. 3, \$62.

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Nash & Cutts' Machine will thoroughly separate Mustard Seed, Cheat, Barley, Oats, Cracked Wheat, etc., from Wheat in a rapid and satisfactory manner.

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Clean Faster, Better, and with Less Work and Trouble.

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BAKER & HAMILTON, Sole Agents, San Francisco and Sacramento.

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Self Regulating
WINDMILLS,
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These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbitt boxes.

Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

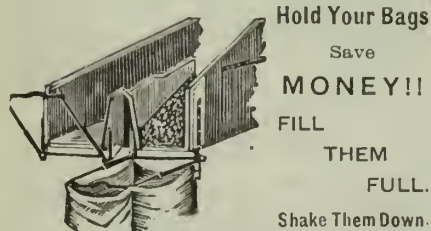
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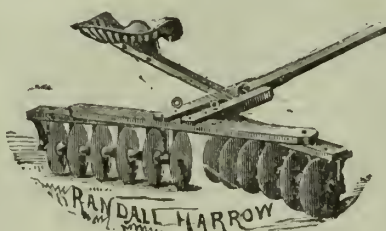
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OVER 10,000 IN USE.

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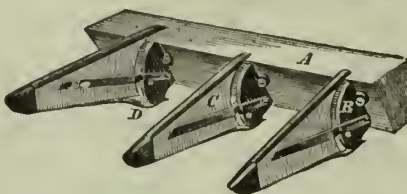
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Sole Agent.

Yolo, Yolo County, Cal.

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Adjustable Grain Lifter for Headers.



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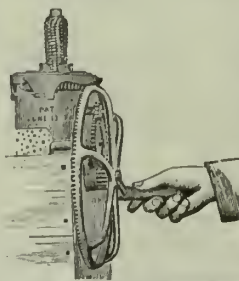


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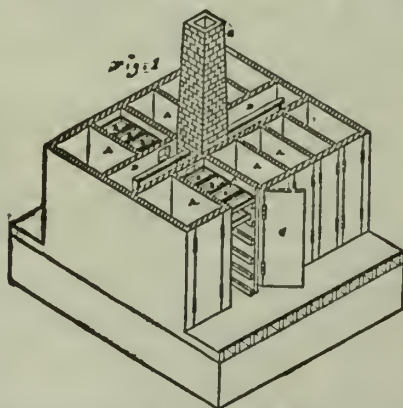
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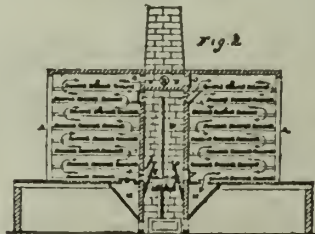
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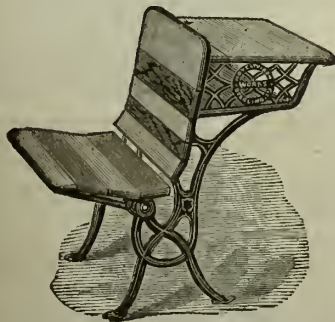
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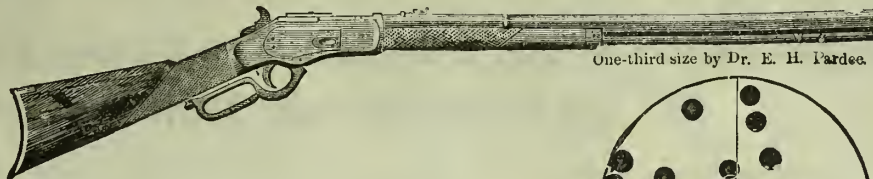
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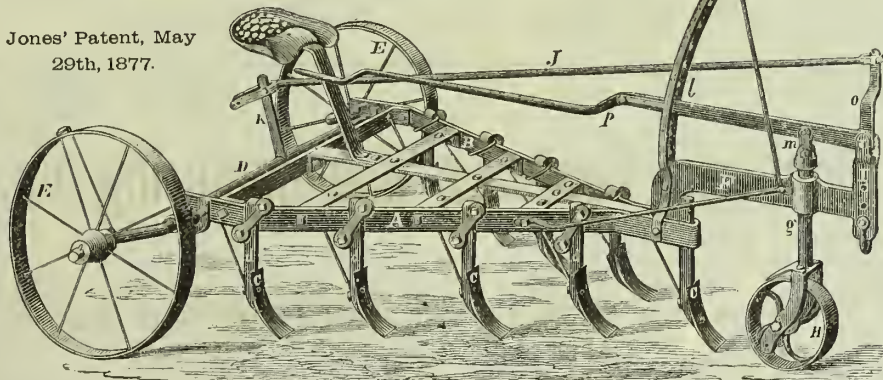
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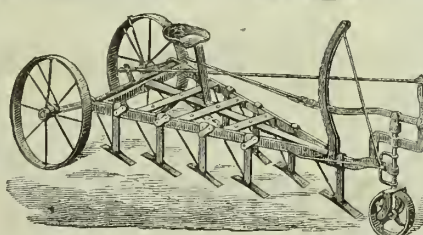


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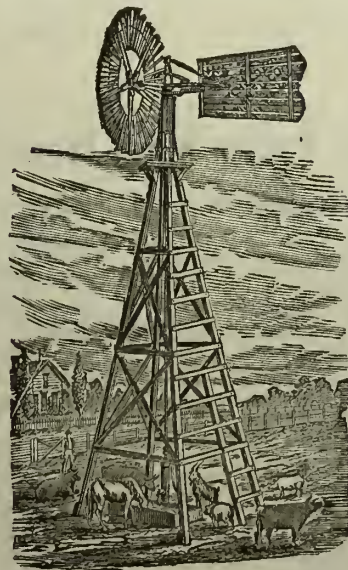
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PACIFIC RURAL PRESS

Volume XVI.]

SAN FRANCISCO, SATURDAY, AUGUST 31, 1878.

Number 9.

Holstein Cattle.—No. 2.

In our former article on the Holsteins we made a few general remarks upon the characteristics of the breed, and gave a portrait of a fine bull, a typical specimen of his kind. At this time we would speak especially of the Holstein cows. In them lies the value of the breed, for the Holsteins are pre-eminently dairy cattle. As will be seen by the engraving the cow is a capacious animal. She is evidently built for milk, although being but a heifer she has not all her points developed. She has the bright and yet quiet and business-like appearance which dairymen know is a good point, for temper and disposition are among the essentials of deep milkers. The fact is, as we hinted before, that the Holsteins have been bred for at least 300 years especially for their dairy value, and during this time the milking power has been promoted by the method of improvement which intelligent dairymen everywhere practice; and that is in preserving and breeding constantly the offspring of the individuals of the herds which score best at the pail. Thus has the milking quality been intensified in the Holsteins, and there has resulted a breed with especial dairy value. As these qualities reappear constantly in the offspring, and as the male fixes his characteristics surely upon his progeny from other cows than those of his own breed, the breed as such is well established and worthy of trust.

The points which are well assured concerning Holstein cows are these: Milking capacity and disposition, from which result a yield of milk far greater than from the common cows of the country; excellent "staying qualities" by which the milking season is prolonged well along to the following calving; large size and ready disposition to fatten when dried off, thus making a large amount of good meat when turned off from the dairy. These essentials of a profitable dairy animal are supplemented by health and vigor of constitution, beauty of form and gentleness of disposition. All these things are in accordance with our own observation of the cattle at the East, and with all the experience we have heard or read of them. For these reasons they are now coming into prominence among the dairy producers of the East.

We promised some facts and figures concerning the actual deeds of Holstein cows in this country. We have so many creditable statements from men we know to be trustworthy,

that our trouble is not which to use but which to omit. A few examples must suffice. Perhaps no more satisfactory statement, considering the comparison it introduces between Holsteins and selected native cows, could be chosen than that of Mr. H. C. Hoffman, President of the Elmira, New York, Farmers' club, a practical dairyman than whom New York has none more trustworthy. In a statement made not long to the club, Mr. Hoffman said: "I have given those in my possession what I consider a thorough and practical test as far as I have gone. I received them (10 head including calves and grades) in the fall of 1872. At the time my small farm was full stocked with a dairy of 16 cows in milk, which I had bred my-

last year. Young Holstein calves show remarkable strength and vigor. They are taken from the dam at 48 hours old, and raised on buttermilk and skim milk, about equal parts, fed cold twice a day; and if given all they will drink, grow faster than I want them to, making a growth of about 50 pounds per month on the average, frequently making 100 pounds, and in one case 110 pounds the first month, and in another 117½ pounds the fourth month. Frequent tests of Holstein milk with cream gauge and lactometer, convince me that it is of good average quality and well balanced, fully equal to the common or mixed dairies as they are found in the country. I make a test every month of each of my cows separate, together

Gerrit S. Miller, of Peterboro, New York, had a Holstein cow, when we lived in a neighboring county, which made a yield for the year of 14,027 pounds, giving 76 pounds as her best day's work. It is not necessary to pursue these records, of which we have many at hand. Our purpose is to call attention to the cattle as deep milkers, and these instances will suffice for this purpose. The point is that a dairyman should always have in mind securing the best milk-making machinery in his dairy. A poor cow is as unprofitable a tool to work with as a poor plow. The true way is to put cows to the test of the scales in her product, and when it appears that she does not make proper use of the food she consumes, take steps to secure animals that will. This method will be of immense value even where the dairyman considers the improved breeds beyond his reach and starts out to improve such material as he has by breeding from the best and weeding out the poorest. All do this to a certain extent, but casual observation of light and heavy pails at intervals is only an approximation to the truth and often a distant one, because one has only his memory to decide on staying qualities.

The engraving which we have used to present to the eye the form of the Holstein cow, represents a heifer called "Minnie Winkle," owned by George E. Brown, of Elgin, Illinois, a leading breeder and importer of Hol-



HOLSTEIN HEIFER, "MINNIE WINKLE," OWNED BY GEO. E. BROWN, ELGIN, ILL.

self with as much care as I am now breeding the Holsteins, and which I knew to be the best at the pail of any dairy in this vicinity, taken collectively; (I have good means of knowing, as I get annually the eight months report of about 120 dairies in this county alone); but for the purpose of giving room to the Holsteins I made a sale of ten of the poorest, reserving a selection of six, five of which I feel confident were equal at least to any five that could be selected from any one dairy in this section of the State. With these six selected cows I placed my Holsteins, both having the same care and keep precisely for two years, or until the fall of 1874, during which time an exact record by actual weight was kept of each and every cow, good, poor and indifferent. The Holsteins (all of them) gave from 25% to 30% more than the others, yielding from 10,000 to 11,000 pounds, while the common or mixed grades gave from 7,000 to 8,000 pounds per year. This was the result for two successive years, with the Holsteins increasing their percentage of gain the

with milk of numerous dairies in the immediate vicinity, and find, in almost every case, the Holsteins run a little ahead in percentage of cream and the lactometer standard also."

These statements show some of the practical working points of the Holsteins in a dairy. Although the cows as a whole average above the common cows as has been stated, there are of course yields of individual thoroughbred Holsteins which rise above the average as with other breeds of cattle. Col. Hoffman has one cow which gave an average of 10,092 pounds of milk per year for four consecutive years, and another which gave 11,680 pounds for three consecutive years. The Unadilla Valley Breeders' association, of central New York, have a cow, five years old, which was milked 303 consecutive days, yielded 12,593 pounds of milk, and after 62 days' rest dropped twin calves. She then went to the pail again, and during the next 30 days gave 2,195 pounds of milk, an average of 73½ pounds per day, and during the last 20 days had no feed but good pasturage.

steins. Her colors, as is characteristic of the breed, are a brilliant contrast of jet and snow. An animal with these colors upon a green pasture makes a striking picture, perhaps a startling one to those who are accustomed to the reds, roans, fawns and grays of other breeds.

BERMUDA GRASS.—Mr. Rich's charming bul-colic and Mr. Hebron's note of trial, on this subject will be read in other columns. We notice that our correspondent, Mr. W. R. Olden of Anaheim, writes to the *Gazette* in favor of the persistent Bermuda on alkali soils, saying: "I have seen it growing most luxuriantly on ground incrustated with an alkali efflorescence—land on which nothing else would grow. When vegetation grows on strong alkaline land, it always has a salty or alkaline taste or flavor; but the Bermuda grass growing on this land seems to be perfectly sweet, and is eaten greedily by animals."

HORSE glanders is assuming uncomfortable proportions in San Francisco.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eps

Possible Values of Bermuda Grass.

EDITORS PRESS:—There may yet some good results come from Bermuda grass after all. Nothing like keeping the subject rolling, as it may live yet and grow finely. Your editorial article on levee protection with Eastern results may be the saving of the pestiferous, self-willed grass. The subject of levee construction and protection of our rich low lands both in this valley and other portions of the State, is a study for future good. There may be some grasses which if sown can shield the wearing away of levee banks. The trial of Bermuda grass has not yet been made here. If the success East is indeed as great as reported, the same could be accomplished here if sufficient roots could be obtained.

The statement read in the article brings to mind a small levee I read of built in the Mississippi valley and set with Bermuda roots. The result was a thick heavy sod, giving no opportunity for washing, the water flowing over as smoothly as glass, and each year the levee gaining strength continually by its vigorous growth of grass. With what observation and severe muscular strength I have worked to destroy the Bermuda, shows conclusively no better use can be made of it. I. N. Hoag intends to experiment on his levee this winter in Yolo county. Other parties gave it a trial last spring, but the season was too far advanced to make it a complete success. Letters of inquiry are all at hand. I would like to see the levee protection practically demonstrated by some one this year. I wish I had a sufficient amount of roots to give to some one that would make a fair trial.

Pastoral Value of Bermuda Grass.

For pastoral service, in answer to many queries from the various dairy counties I have been in communication with, I can refer to past history in the Southern States, and more especially to Col. A. J. Lane, of Georgia, who has practically demonstrated it on 30 acres of pasture on his farm. The land is of a low moist character and the grass makes a heavy, vigorous growth, and produces a heavier yield than any other crop that can be put on the land. Counting the amount of stock pastured and their increase, the value exceeded that of cattle pastured in other ways. The Colonel compares it in this way: What blue grass is to Kentucky, Bermuda grass is to Georgia and the South generally.

The cultivation of grasses suitable for grazing purposes has been a study by many. In the dairy counties of the north the people are anxious to find out the most valuable grass under their conditions. The central as well as the southern counties have the same feeling. The sowing of alfalfa in the valley bottom lands forms a fine pasture and its yield is heavy. Alfalfa has met with good success, but its adaptation lies chiefly in moist soils or those capable of irrigation. Many of our dairymen are scattered over plains, hills, vales and mountain heights. Throughout this space soil, climate and adaptation differ. What many would wish is a grass suitable at all times and in all places. Bermuda, though originally an exotic, grows like a native, as it spreads without sowing or transplanting. It will grow in any soil, wet or dry, upland or lowland, sand or clay, but thrives in proportion to the fertility of the soil. Some declare that it can swim over or crawl under a water-course, which shows it is a great spreader; and this I can vouch for myself.

Grazing in California.

If then this grass had a fair trial at various points, it might prove a great blessing to those who are in need of pasture. At present those who keep flocks of sheep and cattle live a migratory life, at least the herdsman that cares for them. We find them in the spring on the plains feeding on the natural grasses. When these are gone they pass higher up the valleys or take to the foothills or low ravines. There for a time they browse on the low bushes or feed in the green vales. In some of these retired nooks clover is found to grow luxuriantly, giving fine pasture and cutting various growths. A clear running stream and health are the gifts in these situations. As the summer months come on the brook has lost its charm, the verdure of the hill tops changes to brown. The green leaves and young growth of the low shrubs look bare. A higher step is taken to the heights of the snowy peaks, within the pastoral retreat of their high walls for the rest of the season, and here must the faithful herdsman and his happy band retire and remain till the frosts of winter drive them back to home quarters within the vale.

Bermuda Grass for Hay.

In regard to its quality of hay, I can say it is fine in its texture, far better than the coarse alfalfa, but its quantity is less. In answer to this I can speak of a grower in Georgia, in 1872, who sold \$114 worth of grass off of one acre, it selling on the field at \$20 per ton. This gives over 5½ tons to the acre. Also at another place, on very rich bottom land, from one acre was cut at one time eight large two-horse wagon loads, the finest hay ever seen.

In California there are many rich and valuable lowlands, not only in the valleys but other portions of the State. This grass will grow and thrive where the soil is fertile and produce in quantity where richness prevails. The climate is well adapted, and there seems no reason why thousands of acres of reclaimed land should not be used to an advantage for pastoral regions, and let the grass also protect the land with its thick sod of growth over the newly-constructed levee around it. Also it might be introduced in many remote valleys, between the rugged clefts or along the perennial streams issuing from their sides.

One word more as to the manurial advantage and I will close. Col. Lane took a portion of this 30 acres, broke up the heavy sod by cultivation, and sowed it to corn and wheat. It brought him four times the yield over other lands not in sod.

The question has been asked, when is the best time to set out? I would reply: soon after the first rains, with ground in good condition, when it will receive the full benefit of winter rains. I will state my supply is small. If the demand becomes voluminous we may have to import from Georgia or the Islands. I have written this article believing some good may yet grow out of the grass, especially for levee protection, more than for the other points above named. For those interested in the grass, I will have a box for examination at the State fair.

GEO. RICH.

Sacramento, Cal.

Mendocino County.

EDITORS PRESS:—The world still moves, and notwithstanding the eclipse, the sun still shines its hottest. Since that event we have had some of the hottest weather experienced for years, the mercury rising to the dignity of the occasion, and marking 110° on the gable-end of the thermometer. We have heard of hotter places than this, but Ingersoll denies the existence of one, and we have only a soldier's story for the other, so we claim the medal, but let it be of something that is a non-conductor.

Harvesting and threshing are both mostly completed with us, and a light crop of grain is the result, though stacks turned off much better to their size than did the fields. Too much rain. Our county never fails to make a crop, but a dry season is our stronghold, and four and a half feet of water is enough to "cheat" farmers if it does not cheat the grain.

Hops are excellent in quality, the season having been very favorable, but some few small raisers have got discouraged, and have consequently neglected their yards and will therefore realize but little profit even if it is a good year for prices, as it now bids fair to be. About 100 acres of vines were plowed up and the land planted to corn, which one year with another pays as well as hops. J. B. McClure is taking especial pains this year to produce and cure the best hops that will go into market, and as this locality is adjudged the best for the culture of hops on the coast, his prospects of success are good. Some growers have already engaged the new crop at 16 cents, and one has sold on the vines at five cents per pound; but a better price is held for by most cultivators.

The times are not hard to complain of in the eastern part of this county, which is mainly devoted to agriculture and sheep husbandry; but in the lumbering districts of the coast part, it is extremely dull and lethargic. The drouth of last year seems to more deleteriously affect the timber interest this season than it did last; but with the moving of the wheat crop, orders for posts, etc., are expected to originate and the lumber demand becomes better.

The RURAL PRESS is justly popular, and in many families is the only reading matter considered necessary. So fill it full and don't forget to advocate a system of rotation of crops. The one-crop system is what keeps farmers poor and deprived of the comforts of a varied diet that is only attainable by raising the material themselves.

N. B.

Ukiah, August, 1878.

Pea Growing in Canada.

EDITORS PRESS:—In partial answer to Mr. Switzer's questions regarding the field pea, I would say: In Canada, peas are sown usually on heavy upland, bottom land bringing too much straw. In the rotation of crops necessary in that country, they generally follow grass and precede wheat or barley, as they do not seem to impoverish the soil very much. They take the place in that country that corn does in the Western States, being excellent feed for cattle, sheep and hogs, but too heating for horses. They will yield from 20 to 40 bushels to the acre. They are subject to injury from bugs and mildew, the latter if sown too late. I have been informed that they are subject to mildew in these southern counties and are not a profitable crop. I do not think they will ever supplant corn here, but the Canadian season being too short for Indian corn they form a profitable substitute.

The best kinds are the "golden blue" and "large white marrowfat." They are raked in winrows with a common Morse hay rake and threshed with an ordinary grain threshing machine. This is the modern mode. In times

past they were rolled in bunches with a scythe, and threshed with a plaid, or by tramping with oxen or horses.

J. M. M.

Orange, Cal.

THE DAIRY.

Forage Plants.

EDITORS PRESS:—Having derived considerable benefit from the publication of the experiments of your correspondents in different parts of the State, in the RURAL PRESS, I think it is only fair that I should reciprocate by giving you the results of some of mine with forage plants.

Some time ago you published a cut and a description of the prickly comfrey. This induced me to try some. I received a few roots from New York on the 15th of May last. They were set out the next day, came up, and grew right along, and by the 15th of July the largest was three feet high and four feet across. On that day I cut it. It started again directly, and at this date is two and one-half feet high and three and one-half across. From this I infer it will be a valuable addition to our list of forage plants. Stock like it tolerably well, preferring Indian corn. I am surprised that it has not done better with Prof. Sanders, as mine has had neither manure or water, but the land is naturally very moist and rich. I think climate has much to do with it, as Egyptian corn, which does well with him, does not seem to ripen here, though it grows well and produces a large amount of fodder.

Contrary to Mr. Rich's advice I planted some Bermuda grass. Where it has plenty of moisture it is doing well and spreading rapidly on the hills. It is still green, and from the way the stock keep it eaten down I presume they are fond of it. The same may be said of Australian rye grass, which does very well on uplands without irrigation, but it seems to be difficult to get a good stand. Whether it will hold its own with the native grasses has yet to be determined.

Mesquit grass does well in moist land and forms a good sod, but dies out in three or four years.

Last spring I planted some Fiji Island coffee seed in boxes and open ground. None germinated.

I intend trying the Minnesota sugar cane mentioned by Prof. Sanders, and should like to know where the seed can be procured. If it is as good as represented and is gopher proof, it is just what dairymen in California need.

JAMES R. HEBBRON.

Natividad, Monterey Co., Cal.

[We do not think our seedsmen have introduced the amber sugar cane seed yet, but they will do well to do so from all appearances. When the seed is ready it should be advertised. Mr. Hebbroon's communication is of interest. We hope every experimenter in the State will report to us for the common good.—EDITORS PRESS.]

The Dairymen's Meeting in October.

EDITORS PRESS:—The past season has proved so exceptionally unprofitable, if not disastrous, to the majority of butter and cheese dairymen of this State, that I doubt not quite a number will jump at the conclusion that the business is overdone, will sell out their interests for whatever they may happen to bring and immediately embark in some new enterprise, about which they know as little, if not less, than they do of that just abandoned. A good many more will shilly-shally between holding on and selling out until it proves too late to find a purchaser; finally deciding (because forced on them) to try it one more season for luck, and to see if they can quit even with the business. A few shrewd (?) ones will continue because, thinking everybody else is going out of the business, the production must necessarily fall off very largely and their far-sightedness will be rewarded by enhanced returns. Let us be thankful that there is a fourth class who, though unfortunate during the past season, are able to see that by adopting a new method here, as practiced by neighbor A, and doing away with a useless expense there, as economized by neighbor B, their produce can be increased in quantity, improved in quality, reduced in cost, and, strange to say, be made to pay a profit even at such rates as the past season's. I should be sorry to think that there is not even a fifth class, viz: those who have cleared a profit, and a handsome one, too, in spite of the depression in trade and exceedingly low prices realized.

It is for the two last mentioned classes that this communication is expressly intended; but the rest are welcome to the advice and to the profit they may glean therefrom.

There is undoubtedly a great deal to be learned from books, as there is from practical experience and private experiments. Unfortunately most of the books written on the subject of dairying refer to climates, soils, conditions, etc., totally dissimilar to those of California; and one man's life is too short, time too

precious, and living too costly to admit of his indulging in the luxury of personal experience gathered from practical experiments. Those, therefore, who are desirous of saving both time and money, and increasing their incomes, I should advise to join, write for or in any other-wise help to sustain the

California State Dairymen's Association. An institution started three years ago for the benefit of those interested in and depending on all or any branch of dairying for their living, and which has received most signal neglect from those who should have given it their heartiest support. I mean the hundreds of small dairymen who cannot afford to spend their lives and their incomes in experiments. Let us join the association and learn from each other's experiences. Mr. A may be a smart and progressive dairymen, but would he not have proved himself a wiser and been a richer man had he joined the association, and learned that the experiment on which he had just spent \$100 had already been tried by Messrs. B, C and D, as progressive men as himself, and proved a failure? A and B may have farms on which soils, cattle, improvements, facilities for marketing, etc., may be exactly similar, still A gets 20 to 30 pounds of butter more to the cow and one cent to two and a half cents more in price than B does. How is B to learn the secret of A's success? By exchanging notes and experience at the meetings of the association. But, what if on exchanging said notes, B should find that in spite of smaller quantity and lower quality, his dairy should show a larger profit than A's? Would this necessarily imply false returns on A's part or a miscalculation on B's? Not at all. It may simply prove that A has been feeding roots, etc., at an excessive cost of production; that B's cows come in at a more advantageous time; or it may be accounted for by a dozen other reasons, which do not become apparent until we learn the experience of others and compare it with our own.

Can we adopt a better method of getting at this information than that offered by joining the California State Dairymen's Association? P.

Sonoma Co., Cal.

Cheese as an Army Ration.

It seems that the movement to introduce cheese among army supplies, to which we lately alluded, is progressing. About two weeks ago, as reported by the *Utica Herald*, the Dairymen's Board of Trade held a meeting. H. O. Freeman, of Sherburne, presiding. Ex-Governor Seymour made some remarks on the subject of cheese as an army ration. He said that the objection that had been offered to it was that it would not keep. As cheese would in all probability be tried as a ration and a grade of army cheese established, he hoped that factorymen in this section who should manufacture that grade would make such a cheese that no objection could be found against it.

Robert McAdam, of Rome, offered the following:

Resolved, That we tender our thanks to General Sherman, General Macfeely and to the War Department, for the order which has been issued for the use of cheese as an army ration; that this action in this respect is of great use, not only to the large body of farmers engaged in dairying, but will also be of service to the people living in towns and cities by calling their attention to the value and cheapness of cheese as an article of food.

Resolved, That we respectfully request the War Department, and General Sherman and General Macfeely, and such other officers of the army as properly have charge of such subjects, to have a proper investigation and report made to the public as to the advantages of cheese as an article of diet.

WHEREAS, It is necessary to a full and fair trial of cheese as an army ration that only such shall be used for that purpose as is properly made; therefore,

Resolved, That M. Folsom, New York, Robert McAdam, Rome, and G. Merry, Verona, be a committee to suggest to the War Department such specifications for the cheese purchased for such purpose as will secure an article of such quality, form and package as will be best suited for carrying and keeping in good condition through all changes of climate, and for such length of time as the service of the army may require.

Resolved, That the thanks of this board are due to Governor Horatio Seymour for his action and perseverance in successfully bringing to the attention of the officers of the War Department the value of cheese as one of the rations for the soldier.

The resolutions were unanimously adopted.

WALNUT LEAVES AS A SHOO FLY.—We read in an English exchange that a capital plan of protecting horses and cattle from the tormenting attacks of flies in hot weather is to wash their coats in the morning with a decoction of walnut leaves, the peculiar smell of which effectually keeps the would-be marauders at a distance. The decoction is said to have the further power of destroying any eggs that may have been already deposited in the skin. This is what we read, and it might be well to make the trial. It seems too bad to nurse up a fine heast with daily baths of "yarb tea." Try it on a runt first as an experiment.

FLORICULTURE.

Pelargonium Quercifolium.

EDITORS PRESS:—If there is any season of the year peculiarly trying on plants, it is these hot, sultry days of our California summer; few plants are to be found on which the foliage is not more or less scorched and withered, particularly varieties of the *Pelargonium* species. It is therefore with pleasure I call your attention to a remarkably handsome *Pelargonium*, not the least of its merits is that while other varieties of the *Pelargonium* species are curling up their scorched and withered foliage, and heaving us in their mute manner to have mercy on them and give them shade, this plant stands out as defiant and luxuriant as if it were enjoying the cool fresh breezes of an April morn. While thus enjoying the beat of summer, with equal fortitude it defies the cold of winter, even to the freezing point, being in this respect much harder than the *Zonale* varieties.

In the foliage lies the beauty of this desirable plant, the flowers being small and inconspicuous like those of the favorite rose *Pelargonium*, although much more brilliant in color than the flowers of that variety, being a bright crimson. It is popularly known as the oak-leaved geranium, from the fact that the foliage greatly resembles that of the oak, so much so in fact that the merest amateur would recognize it as such among hundreds of similar varieties, from the foliage alone. The leaf is deeply sinuate-lobed at the base, becoming less so towards the apex; on the upper face of the leaf are concave depressions marking the course of the veins and veinlets; turning the leaf over, we find the veins and midrib standing out full, resembling graduated cords.

The petals are long and slender, making the leaf particularly valuable to florists in bouquet and cut flower decorations. It is propagated from slips only, which strike readily, like all *Pelargoniums*, and its culture is very simple. It has only one fault, and that is the fact that it is an old plant; if re-introduced under some new and startling cognomen it would become a great favorite.

Answers to Inquiries.

CACTUS.—"I have a cactus that is seven years old, and as yet shown no signs of blooming. Some call it melon or globe cactus, others Green Mountain cactus. How shall I treat it? Is the flower worth waiting for?"

R. W. P.

If it is the cactus we take it to be, the flower is well worth waiting for; but we think it should have bloomed before. Give it but little water in the winter, in the summer transplant and keep all the sprouts plucked off. The soil should be composed of sand, old plaster and loam in equal portions. The cactus must have a season of rest to do well and bloom. Where it grows naturally there are usually long dry seasons, and we must imitate this season of rest by withholding water in winter.

BEGONIAS.—"I have several begonias said to be winter bloomers, I have had them three years, but they fail to bloom, what shall I do with them?"—A. M. G.

Your begonias intended for winter blooming should have been repotted into larger pots in June. Do it at once, and place them in a shaded border; pinch off all blossoms, and keep trimmed up pretty snug until the end of August, then allow to grow stalky; if inclined to sucker too much, as some varieties will, remove them constantly, cutting out close, and allow the leading branches to extend their growth somewhat more.

OLEANDER.—"I have been told the oleander should always be in the shade, and it will always be in bloom. Is this true?"—C. P.

The oleander only flowers once in the year, but keeps in bloom for several months. With us it is in bloom in June, and lasts until September. It delights in the sun. I have seen specimens in the shade, but the flowers were small, faded and few. The assertion is false.

VALLOTA.—"How old must the Vallota lily be before we may look for flowers?"—L. M.

The vallota hulk must be three years old before it blooms. It frequently fails to bloom the season after transplanting. The vallota is not a lily but an *Amaryllid*.

El Dorado, Cal.

W. C. L. DREW.

BOTANICAL STUDIES.—Prof. Meehan, in the *Independent*, remarks that there are few scientific fields that afford more scope for original and interesting observation than the botanical. There is hardly a day but some student strikes on a novel feature, and it will be many years yet before we shall have discovered in it all that is to be known. In an English paper recently we have an interesting account of the productiveness of bulbs. Some yield an immense number of offsets, while others reproduce very slowly. In the case of one variety of tulip, called the "Goldham's Mary," only one new bulb is made every year. Many varieties of tulip "think nothing" of yielding a dozen or more. Among the *Gladiolus* of our garden the same was found to exist. From one variety, called "Brenchliensis," the observer could get a thousand young hulks in a half-dozen years, while many will not give half a dozen new bulbs a year. There is, of course, a reason—some law governing this productiveness, and which, when discovered, will throw light on many other problems; but the reason has not been made clear yet.

ARBORICULTURE.

The Atlantic and Pacific Forests.—No. 2.

[By PROF. ASA GRAY.]

From the Gulf of Mexico to the Gulf of St. Lawrence the amount of rain decreases moderately and rather regularly from south to north; but, as less is needed in cold climate, there is enough to nourish forest throughout. On the Pacific coast, from the Gulf of California to Puget sound, the southerly third has almost no rain at all; the middle portion less than our Atlantic least; the northern third has about our Atlantic average.

Then, New England has about the same amount of rainfall in winter and in summer; Florida and Alabama about one-half more in the three summer than in the three winter months, a fairly equable distribution. But on the Pacific coast there is no summer rain at all, except in the northern portion, and there little. And the winter rain, of 44 inches on the northern border, diminishes to less than one-half before reaching the Bay of San Francisco; dwindles to 12, 10 and eight inches on the southern coast, and to four inches before we reach the United States boundary below San Diego.

Taking the whole year together and confining ourselves to the Coast, the average rainfall for the year, from Puget sound to the border of California, is from 80 inches at the north to 70 at the south, *i. e.*, 70 on the northern edge of California; thence it diminishes rapidly to 36, 20 (about San Francisco), 12, and at San Diego to eight inches.

The two rainiest regions of the United States are the Pacific coast north of latitude 45, and the northeastern coast and borders of the Gulf of Mexico. But when one is rainy the other is comparatively rainless. For while this Pacific rainy region has only from 12 to two inches of its rain in the summer months, Florida, out of its 40 to 60, has 20 to 26 in summer, and only six to 10 of it in the winter months.

Again, the diminution of rainfall as we proceed inland from the Atlantic and Gulf shores, is gradual. The expanse that is or was forest-clad is very broad, and we wonder only that it did not extend farther west than it does.

On the other side of the continent, at the north, the district so favored with winter rain is but a narrow strip, between the ocean and the Cascade mountains. East of the latter the amount abruptly declines; for the year, from 80 inches to 16; for the winter months from 44 and 40 to eight and four inches; for the summer months, from 12 and four to two and one.

So we can understand why the Cascade mountains abruptly separate dense and tall forest on the west from treelessness on the east. We may conjecture also why this North Pacific forest is so magnificent in its development.

Equally, in the rapid decrease of rainfall southward, in its corresponding restriction to one season, in the continuation of the Cascade mountains as the Sierra Nevada, cutting off access of rain to the interior, in the unbroken stretch of coast ranges near the sea, and the consequent small and precarious rainfall in the great interior valley of California, we see reasons why the California forest is mainly attenuated southward into two lines, into two files of a narrow hut lordly procession, advancing southward along the coast ranges, and along the western flank of the Sierra Nevada, leaving the long valley between comparatively bare of trees.

By the limited and precarious rainfall of California, we may account for the limitations of its forest. But how shall we account for the fact that this district of comparatively little rain produces the largest trees in the world? Not only produces, alone of all the world, those two peculiar big trees which excite our special wonder—their extraordinary growth might be some idiosyncrasy of a race—but also produces pines and fir trees, whose brethren we know, and whose capabilities we can estimate, upon a scale only less gigantic. Evidently there is something here wonderfully favorable to the development of trees, especially of coniferous trees; and it is not easy to determine what it can be.

Nor, indeed, does the rainfall of the coast of Oregon, great as it is, fully account for the extraordinary development of its forest, for the rain is nearly all the winter, very little in the summer. Yet here is more timber to the acre than in any other part of North America, or perhaps in any other part of the world. The trees are never so enormous in girth as some of the Californian, but are of equal height, at least on the average, 300 feet being common, and they stand almost within arms' length of each other.

The explanation of all this may mainly be found in the great climatic differences between the Pacific and the Atlantic sides of the continent, and the explanation of these differences is found in the difference in the winds and the great ocean currents.

The winds are from the ocean to the land all the year round, from northwesterly in summer, southwesterly in winter. And the great Pacific Gulf stream sweeps toward and along the coast, instead of bearing away from it, as on our Atlantic side.

The winters are mild and short, and are to a great extent a season of growth, instead of suspension of growth as with us. So there is a far longer season available to tree vegetation than

with us, during all of which trees may either grow or accumulate the materials for growth. On our side of the continent and in this latitude, trees use the whole autumn in getting ready for a six-months' winter, which is completely lost time.

Finally, as concerns the west coast, the lack of summer rain is made up by the moisture-laden ocean winds, which regularly every summer afternoon wrap the coast ranges of mountains, which these forests affect, with mist and fog. The redwood, one of the two California big trees—the handsomest and far the most abundant and useful—is restricted to these coast ranges, hatbed with soft showers fresh from the ocean all winter, and with fogs and moist ocean air all summer. It is nowhere found beyond the reach of these fogs. South of Monterey, where this summer condensation lessens, and winter rains become precarious, the redwoods disappear and the general forest becomes restricted to favorable stations on mountain sides and summits. . . . The whole coast is bordered by a line of mountains, which condense the moisture of the sea breezes upon their cool slopes and summits. These winds, continuing eastward, descend dry into the valleys, and warming as they descend, take up moisture instead of dropping any. These valleys, when broad, are sparsely wooded or woodless, except at the north, where summer rain is not very rare.

Beyond stretches the Sierra Nevada, all rainless in summer, except local hailstorms and snow-falls on its higher crests and peaks. Yet its flanks are forest-clad; and, between the levels of 3,000 and 9,000 feet, they bear an ample growth of the largest coniferous trees known. In favored spots of this forest—and only there—are found those groves of the giant *Sequoia*, near kin of the redwood of the coast ranges, whose trunks are from 50 to 90 feet in circumference, and high from 200 to 325 feet. And in reaching these wondrous trees you ride through miles of sugar pines, yellow pines, spruces and firs, of such magnificence in girth and height, that the big trees, when reached—astonishing as they are—seem not out of keeping with their surroundings.

(To be Continued.)

Deodara "Sacred Tree of God"—*Cedrus Deodara*.

[Written for the PRESS BY DR. A. KELLOGG.]

"Empress of the wood,
By sudden blast declined
Bends arching down, and bows before the wind;
The deep roots tremble till the blast blows o'er,
And then she rises stately as before."

The great Hindoo or Indian cedar of the Himalaya mountains of Asia is, by far, the most grand, lofty and graceful cedar in the known world. It combines the most massive magnificence with majesty and beauty; the softened sheen of gray-green tinted foliage is almost feminine in delicacy, so pleasing and soothing is it to the eye; of what foreground adaptation, deepening the perspective on the landscape; curving limb and drooping spray, every line is one of beauty, every quality one of superior use. The wood is little less than everlasting; soft, firm, fine-grained and fragrant, taking the bright polish of hewn agate, abounding in amber-resin, yielding oil and medicine, and of almost universal application to the wants of man. The Hindoo stands in awe before the tree, plants it beside his hallowed temple, and dares not devote it to his ordinary use. Hence his *devadara* or Tree of God, used as incense on great occasions in Oriental life.

It flourishes on its native mountains at an altitude of 7,000 to 12,000 feet, is 100 to 200 feet high, and 30 feet or more in circumference; bark grayish; lesser branches and leaf twigs clad in soft bloom; the ample branches extend afar, first a little ascending near the trunk, and then arching outwards and pendulous at the extremities. The hounteous foliage though dense is not heavy; even the darkened and shadowed greens are softened by bluish tints of glaucous bloom. The leaves are usually tufted, radiating silvery light; the little thready or needle-like leaves are larger than those of the Cedar of Lebanon (*C. libani*). The male catkins upright, yellowish, tinged with red. The cones mostly in pairs standing upright, like birds upon the branches, are larger and broader than those of Lebanon, rich red-brown; scales green-margined and very resinous; these fall away when ripe, leaving the woody axis like our own silver firs.

It sheds a refreshing and rejuvenating odor on the evening air and after rains, like that felt on walking in a pine or fir grove after showers, which the Cedar of Lebanon does not, or in far less degree; in this it is of peculiar characteristic fragrance.

The wood, as is observed, is hard and fine-grained, but easily wrought into temples, and every variety of buildings where it is peculiarly desirable for its durability and fragrance, also for cabinet utensils, and for shipping. Of this, the Macedonians built their ships, floating them down the river Hydaspes. Many suppose this was also the chief source of supply under the common names of Holy Writ.

With such a splendid mantle of feathery lightness and elegance the deodar cedar bears the palm of dignity and grace, without the cast of the formal and pharasaic, or any clean-cut pattern of prudish or brawny monotony, as in *aracarias*, or the leafy precision of some silver fir that tower so grandly and fascinating in our own forests, yet it hath no obtrusive display of power in body, branch or bough, simply

serene repose! With all the honors and graces of the grove united in one sublime representative, with the firmness and port of the sacred pyramid, it aspires sufficiently heavenward, as it were, hopes humbly in meekness and never-varying mildness, yet doth it reach abroad to embrace all earthly science and use as well. Perhaps in age it also spreads athwart the heavens, as hecometh the aged, like unto the Cedars of Lebanon of sacred renown.

Can any one tell us why there is no demand for this peerless tree? Every citizen of San Francisco and nearly all in the State are familiar with it, having seen it at that beneficent institution, Woodward's Gardens. Many hundreds of pounds of seeds have from time to time reached the market; we have diligently inquired now for many years, and with one voice the reply is, "no demand"! We would there were no less demand for other trees, but more for this. Like conifers in general, they are of rapid growth and easy culture.

THE SWINE YARD.

Examination for Trichina.

We are not aware that the dread trichina has yet been found alive in this State, though no one can tell how soon it may appear. Notes of the best ways to recognize it may be of value to our amateur microscopists. For a first examination under a microscope, use a one-inch objective. Place a fine piece of the muscle in question on a glass slide in a drop of serum, or aqueous humor, or a 1% solution of common salt. Teaze out the fibres and separate them from one another by means of fine needles set in sticks for handles; keep the eye all the while on the work, and watch for the dim outlines of the worm. Perhaps the cyst will appear first; it may be that your manipulations will have torn the cyst and let the worm out. A little dilute hydrochloric acid added when the cyst is once discovered with decalcify it and render the parasite visible through its translucent walls. When the tissue is well displayed by the above means, a thin glass cover should be placed over it; the focusing will be better and the parts more distinct. Judicious pressure on the cover glass may often be made to bring the trichina into view by thinning and displacing the parts under it. It is often an aid to use some staining fluid; Beale's carmine, or the hæmatoxylin fluid. I have have often placed a drop of this fluid at the edge of the cover glass, watching the field while it made its way by capillary attraction among the fibres of the tissue, and have seen the outlines of the parasite come out clearly and distinctly when nothing could be seen before.

The examination by thin sections may be practiced with advantage. If the muscle be carefully dried, very beautiful sections may be made with a sharp razor dipped in dilute alcohol. These may be easily handled with a camel's hair pencil. The thinnest should be placed upon a slide under a cover glass, and may be examined directly in staining fluid or in the salt solution. Excellent sections may be cut from frozen tissue or from tissue soaked for a few weeks in strong alcohol, or in a 10% solution of bichromate of potash.

The Formation of the Tulare Plains.

Mr. J. R. Scupham, scientific expert of the Central Pacific Railway Company, makes a report in the *Bulletin* on well-boring in the Tulare plains, which contains some interesting facts concerning formations, etc. The well was bored near Tipton. For a depth of 280 feet mountain debris was pierced. The first signs of an abundant supply of water were discovered after passing through a stratum of sandstone from four to six feet thick, lying over a bed of quicksand. The first flow was at the rate of eight gallons a minute from a seven-inch pipe one foot above the surface. Then a five-inch pipe was sunk 30 feet deeper, which pierced a stratum of blue clay containing four separate layers of sand, each of which contributed a supply of water. The lower one gave out a considerable volume of water. It was decided to stop sinking at this step to secure the water already discovered. The well at last accounts was delivering 86,000 gallons a day out of a five-inch pipe, four feet above the surface of the plain, and the supply is constantly increasing instead of diminishing.

Mr. Scupham reports that the water is remarkably pure, showing its identity with glacier lakes. It has less than six grains of solid matter to the gallon. The solid substance is chloride of sodium, which corresponds almost exactly with the waters of Lake Tahoe. A well of this capacity gives enough water to irrigate 100 acres of ground, and its cost is estimated at from \$700 to \$1,000. Mr. Scupham believed that water can be obtained throughout the whole length and breadth of the Tulare plains by sinking wells to the depth of 300 or 400 feet. As to the chance of diminished flow after numerous wells have been sunk, Mr. Scupham estimates that wells on each quarter section of land would not materially affect the supply, and they might be placed much closer together without decreasing the flow. The temperature of the water is 72°.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Our New Constitution.

Fixing Rate of Interest.

There seems to be a desire in the public mind that our new Constitution should fix the rate of interest at 7% per annum; but why it should be fixed at 7% no reason is given.

If it is right to reduce the interest on money by Constitutional law from 12% to 7%, the same right and power could reduce interest to an equitable one of 3.65%.

It would then be 1% greater than the industries of France pay for the use of money, and greater than the income of money when invested in the industries of these United States, which income statistics show to be less than 3% per annum.

The three fundamental difficulties with which the industries of California have to contend in regard to money is, first, its inadequate supply; second, its imperfect distribution; third, its unjust and varying rate of interest.

To fix a just rate of interest by Constitutional law would only remove the third difficulty, and in a very arbitrary way. It would neither create a supply of money nor distribute it to the industries. The plan suggested below would remove every difficulty without an arbitrary penal law.

Our Constitutional Convention was called by the votes of the producers. If the fundamental law of the State is to be changed or improved, it appears to be California's golden opportunity to release her industries from the curse of money monopoly, high interest, inadequate supply and unjust distribution of money.

By inserting a clause in the new Constitution, empowering the Legislature to establish a National Bank under the National Bank Act, or at least insert a clause permitting the people of this State to vote upon that Bank proposition at the first general election held under the new Constitution.

The money power of the land worked for their own interest when they prevailed upon Congress to destroy our greenbacks and to pass the National Bank Act, by which the Government was authorized to give them bonds, drawing 6% interest per annum for their greenbacks, and in addition to the bonds give them 90% of their face value in bank notes, which the bankers loan to the industries at a yearly interest of from 5% to 15%.

It will be observed that neither of the industries nor any individual engaged only in industrial production reap any advantages from that bank act, but are always taxed to pay the bond and bank note interest, whereas the greenbacks had cost nothing.

If it is right to fix the rate of interest on money by law, the approximate net income of the industries is the figure at which it should be fixed. This rate, 3.65%, is not far from the yearly net income of California industries, including farming.

It seems strange that Congress should so far have neglected the industries as to pass a law favoring a few non-producers, and by that act entailing a curse of double interest upon the industries of the whole nation.

If Congress had taxed the non-producers to sustain the industries, we should not have complained, as that would have tended to national prosperity. The aim of the projectors of the National Bank Act, no doubt, was to tax the industries for the support of shoddy aristocrats and schemers, and thus far the plan has worked most admirably, as they fare sumptuously every day, and millions are yearly poured into their coffers from the National Treasury.

It appears improbable that that unjust law should be repealed for many years yet to come, and it behooves the people to lay hold of any advantages yet within their reach under that bank act.

The organization of a National Bank appears to be the only way, and this the only time ever yet opened to the industries of this State to avail themselves of any advantages under that act. But in this way they can supply themselves with money at all times and at reasonable rates, and thus break the oppressors' yoke from off the neck of our prostrate industries, and thereby remove the worst curse from this State, against which the industries have had to contend.

When we read that certain National Banks netted 15% and even 40% per annum, we say woe to those industries upon whose vitals they fed and fattened! O Lord, have mercy upon them! Supply the industries of California with money at 5% per annum and soup houses for the gratuitous support of healthy, industrious men and women, would be things of the past. The wail of the merchant of "hard times" and the noise of the sheriff's hammer as it descends and shuts off forever the farmer from his hard earned and cherished home, will die away in the receding past. Willing laborers would no more tramp our streets in idleness and want, with doleful countenances like broken-hearted mourners mourning for their dead, many of which rather than endure longer their untold suffering end it by suicide.

O suffering laborer! O oppressed industries! In the name of suffering humanity, and

in the fear of God, here is your remedy now in your own hands! Apply it. Bestir yourselves, and with all available means within your reach strive for it. If this opportunity is allowed to pass unimproved, no other way or time may ever appear for its accomplishment.

Once start this bank and fix its maximum rate of interest at 5% per annum by the Constitution, and no usury law would be necessary to regulate the price of money at other institutions, as this bank would hold the same interest regulating power over all other banks in California as the Bank of England does to the money lenders of England. If the regular rate of interest at this bank was 5% no borrower would pay a much greater percentage to other institutions as long as the bank remained opened to accommodate every citizen that made a legal demand upon it.

A bank established in San Francisco of the character above hinted at, and a branch bank in every county in the State, the same to be also saving banks with maximum interest of 5% fixed by the Constitution, would enable manufacturers and farmers living in distant parts of this State to obtain money at the same rate of interest as the most favored borrower of San Francisco. Now farmers living in outside counties pay from 3% to 8% per annum more than is demanded of San Francisco borrowers.

These advantages would be all that labor or commerce desires, and all the industries of California requires to lift them from the "slough of despond" in which they are now floundering.

JOHN M. HORNER.

Washington, Alameda Co., Cal.

Proposed Amendments to the Constitution.

EDITORS PRESS:—The following proposed amendments were read by Dr. Hall, at the late public convention of Grangers of San Bernardino county:

Non-taxation of intangible property, such as growing crops, which may be worth something to-day, but only prospectively, and may be blasted to-morrow. Taxation of money, mortgages, debts and bonds.

Taxation of mining and other stocks at ruling rates of such stocks at time of assessment.

To hold elections in November of the even year as in the Eastern States. It would lessen the number of elections and save expense.

All public officers should receive moderate fixed salaries, and all fees should be accounted for as public money.

United States Senators from California should be elected by a direct vote of the people.

All money of the United States made by Congress a legal tender for private debts, should be received in payment of taxes and all other public dues.

Interest exceeding 7% per annum for the use of money should be prohibited.

All farming lands of equal producing capacity should be subject to equal taxation, without reference to improvements.

Restrictions upon the power of Supervisors, in debt-creating and money appropriating powers.

Equalization of taxes.

Limitation of time, say six months, for decisions of questions and cases submitted to District and Supreme Courts, with the necessary penalty.

General appropriation bills to originate in the House, and to contain nothing but appropriations for expenses of government. All bills should be read once or more, section by section, before final passage.

Any person selling or purchasing votes, or who violates a position of public trust by defalcation, speculation or otherwise—upon conviction thereof shall be forever disfranchised from voting and holding office, or shall be treated as a felon.

Provide for minority representation.

No State officer shall be interested directly or otherwise in any contract for supplies furnished or work done for the State.

Make the State prison self-sustaining.

Provide that the right of eminent domain shall not be abridged so as to prevent legislative action in reference to property and franchises of corporations and individuals. Provide that railways shall be declared public highways, the people having the right by legislative action to regulate fares, freights, etc., the same as with toll roads, ferries, etc.

The State has the right, and it is its sacred duty, to provide such facilities for education at the public expense as can be availed of approximately by all, and it should insist that all avail themselves of such facilities, for children under 14 years of age at any rate.

Suffrage is hereby declared to be a duty of citizenship which shall be enforced by proper legislation.

Also, power to enable those who wish, to form co-operative societies as nearly as possible in accord with the Rockdale system, especially as regards one vote only to every member, no matter how many shares of stock that member may hold.

The property of the blind, and the deaf and dumb, to the amount of \$5,000, should be exempt from taxation.

There should be no special legislation by the State Legislature, and the Legislature should not meet oftener than once in four years, except at the call of the Governor for special purposes.

In many parts of the State, irrigation is a prime necessity, greatly conducive to the public good, and consequently the right of eminent

domain is applicable thereto. The waters available for such districts should be dedicated to irrigation uses, and segregating any given source of supply to the use of all the land needing it susceptible of irrigation therefrom. The Constitution should declare the right of condemnation of already acquired and vested lesser uses of water to greater public uses, whenever so required for the public good.

SECRETARY.

Riverside, August 18th.

AGRICULTURAL NOTES.

California.

ALAMEDA.

A NEW SEEDLING PEACH.—Oakland Times: We are indebted to Mr. A. D. Pryal, nurseryman, for some magnificent specimens of his new seedlings peach, which he has named the "Dr. D. Gibbons," in honor of a gentleman who has for over a quarter of a century advanced the interests and endeavored to assist the farmers, nurserymen and pomologists of the county and State by every means. The tree on which the peach is grown is very productive, and bears good and regular crops. The leaves have uniform glands. The fruit is large and oval; the suture runs on one side, and terminates by an acute swollen point at the top. The skin is clear yellow, showing a fine dark red cheek when fully exposed; flesh yellow, melting, juicy and delicious. The fruit ripens about the middle of August.

CONTRA COSTA.

LATE SOWN GRAIN.—Gazette, Aug. 24: We mentioned some time about the middle or latter part of May, we think, that Mr. I. J. Smith, of Clayton, had left with us some quite promising looking heads of late sown wheat and barley; the wheat sown on the 18th of March and the barley on the 1st of April. The wheat was then just in the milk and the barley in the tough dough state. He now reports one piece of the late sown wheat, that was but slightly affected by rust, as having threshed out an average of 1,197 pounds per acre; and another which quite badly rusted yielded but 560 pounds per acre. The 1st of April barley turned out 1,900 pounds per acre.

EL DORADO.

FRUIT.—Republican, Aug. 22: Never were our orchards so overloaded with fruit as this season, and where care has been taken to thin out properly, never was the fruit better. It is impossible however to produce superior fruit when the tree is so loaded as to endanger, and frequently break, half the branches, as is too frequently the case. If from one-half to two-thirds of the fruit was picked off early in the season, that left to mature will be much more profitable than the whole crop would be, and it costs no more to pick it in May or June than it does in August or September. It is to be hoped that our orchardists will pay more attention to this matter in the future.

FRESNO.

THE LUMBER REGIONS OF FRESNO COUNTY.—Republican, July 31: As the great San Joaquin valley is almost wholly without timber of any kind, and as the rapid settlements now in progress have created a demand for a large amount of wood and lumber, a knowledge of our available resources for both is of general interest. No county in the State has a larger body of timber suitable for lumber than Fresno. In the extreme northern part of the county, on the head of the Fresno river, are about 50 sections of heavy timber, consisting of sugar pine, yellow pine, fir, redwood or big tree, and white cedar. The California Flume Company are owners of lands, mills and flumes in this locality, and, last year, sawed and sent to the plains nearly 10,000,000 feet of lumber. The company have one large mill in active operation and two more in course of construction, the latter to be run by water power. The flume, 55 miles in length, terminates at Madera, on the railroad, at which place the lumber is piled and sawed into smaller sizes as needed. South of the San Joaquin river is a body of timber, on what is known as Pine Ridge, about four miles wide and five miles long, supplying a rather better quality of lumber than the timber further north. Three mills are in operation in this belt of timber, one run by M. J. Donahoo, one by Mock & Humphreys, and one by Grass & Daniels. These mills cut about 6,000,000 feet annually, most of it finding its way by wagons to Fresno, distant 45 miles, and the surrounding plains. Another large belt of timber lies south of King's river, extending into Tulare county. Several mills have cut lumber in this locality for the past 10 years, all of it being hauled to Visalia or vicinity. These mills are not in operation at present. There is an abundance of timber in the mountainous part of the county to supply all the demands of the plains population, until the plains themselves shall be made to grow the wool and lumber needed by the people.

MARIN.

DIVISION OF ESTATES.—Journal, Aug. 22: The whole township of Point Reyes is practically owned and controlled by one man. It is divided into good sized dairy ranches, improved and stocked by the owner, and leased in terms of three to six years, at so much per cow. The tenants are a superior class of people, having education and refinement, and, it seems to us much more than average thrift. We do not speak of the present season, which has been the poorest for many years, but of the average for

say the last decade. The argument is, that a section so rich and happy under adverse conditions, will be a veritable garden of Eden when the tillers are the owners, when leases give way to deeds, and the sojourners become the permanent residents. And this time is at hand. Mr. Shafter's 13,600 acre tract, on Drake's bay, Point Reyes, is now surveyed into small tracts of 20 to 80 acres, and offered for sale on easy terms. It strikes us that the time cannot be far distant when small farms, so convenient to the metropolis, may be managed with profit, though it has hardly arrived yet. A colony of Eastern people are in correspondence with the agent of this tract, who, should they buy it, would be a valuable acquisition to our population. Whatever may be the immediate result, Mr. Shafter's offer is a good one. It is in the line of improvement. It accords with the reform ideas of the day, and the ultimate effect must be to improve the condition and enhance the wealth of the county.

MENDOCINO.

HOPS.—Ukiah Press, Aug. 23: The season of hop picking commenced last Monday morning. Bartlett started about 130 hands into his 40-acre field. McClure on Tuesday started about 50 hands into his 40-acre field. The crop, from all accounts, will be better this year than last. Bartlett thinks 1,200 pounds per acre will be raised on his field, where last year 1,000 pounds was the limit. J. H. Burke says his hops will be inferior to last year's, not owing to the season or to any lack of preparation, but to the age of the vines. This is to be expected after the vines pass their tenth year.

MONTEREY.

THE MESA.—Democrat, Aug. 10: The "Mesa," as it is called, that long slope on which by insensible degrees one climbs from the bank of the Salinas over a thousand feet to the grounds of the Paraiso springs, turns out to be good farming land. It is very extensive, and, the eastern portion being public land, it is a pleasure to see that comfortable homesteads are springing up upon it. We rode over the ground Wednesday and talked with the head men among the settlers, A. W. Wiley and John Whisman, whom we found threshing wheat, their barley and hay crop having been already sown. The late sown of the first had not escaped the rust but that which was put in early was of good quality and their barley is first-class. What surprised us was to see corn, near Mr. Wiley's house, growing as vigorously almost as in the Pajaro valley. He has a vineyard, besides, and plantations of fruit trees and of eucalypti, all of which are in a flourishing condition. In a word, this district which has so long escaped attention is now proved to be a capital location.

SACRAMENTO.

NOTES.—EDITORS PRESS:—Sacramento is noted for having many beautiful flower spots, with their clustered vines, variegated flowers, tree ferns, choice shrubbery, interspersed with tropical fruit, throughout her thickly settled compass. Beside the many fine residences, there is perhaps no more beautiful spot to spend a leisure hour than admiring the many selected varieties of trees, shrubs, flowers or plants in the capital grounds. Its many-terraced green sward, in front and side view, presents a charm to the eye of beauty and loveliness. The grounds are kept in perfect form and comeliness. Gardens of taste are not only found among our city belles, but the country cousins show an admirable art in their selections and high culture. Among the many plants the eye will rest on are the single and double tuberose, also a dwarf variety named the "Pearl." The stems rise about two feet, and beautiful pure wax-like flowers hang in profusion, mingling their fragrance with choice exotic plants that appear to grow as thrifty as in their balmy southern clime. The fine perennial pampas grass is daily unfolding its sheaths, and the silver plumes wave gracefully in the summer breeze. Some grow with longer plumes, showing a finer quality and richer to behold. For a valuable winter ornament that retains its color and form, the everlasting varieties of "everlastings" have a space to perfect their form. *Helichrysum* flower is one of good variety of colors. The stem grows about two feet high; the flower should be cut before it fully expands. There are the double rose-red, white and yellow varieties. Some fine mountain ferns have been transplanted and are found growing in and around the bay windows. Our vineyards are hanging in thick clusters of many colors. The outlook for sales is not promising. The heavy expense for use of cars casts a dark shadow on the enterprise of shipping eastward. How many towns and cities East would be glad to receive the heavy clusters of the finest grapes in the world could they be transported with light expense. If a moderate price could be obtained the road would not be the loser. It would make such a large outlet for the abundance that our soil produces. As it is, the choicest are utilized in raisins that can be boxed up and thereby find their way in market when wanted. The balance is converted into wine and brandy. Apples and pears are nearly worth less, for you have to look before you bite. The crop falls readily off the trees and good for hogs, being convertible into pork. Small fruit, peaches, plums and grapes, is really the only salable commodity in market this year. The call for cattle stalls for State fair use is larger than any previous year. It is expected a finer display in that line than ever before.—Geo. Rich, Sacramento, Cal.

SAN BERNARDINO.

THE OUTLOOK.—Colton *Semi-Tropic*, Aug. 17: After all our valley has not such great cause for grumbling at the crops this year. To be sure the wheat crop turned out badly, but a great deal of grain was harvested and is worth something more than half price. The barley crop and the hay crop are both very heavy, and consequently, prices rule low. Better low prices and full granaries, than high prices and nothing to sell. The fruit crop will be large and the quality will also be good. The crop of berries, notably strawberries and blackberries, has been a good one, and thousands of dollars worth have been marketed, which has also helped things for the growers. The honey crop is good, in fact large, considering the greatly reduced number of hives that we have now compared with two years ago. The price of honey is not so high as apiarists would like, but those who are able to hold their crop a few months will realize fair prices. Taking all things into consideration, we may fairly hope that the heavy clouds of financial distress which have so long hovered over our valley, have at last broken away, and the light of better times is dawning. So we say pluck up courage, brave hearts, struggle and strive yet a few short months, and all will be well.

SAN DIEGO.

MR. HARBISON'S HONEY CROP.—*Union*, Aug. 15: Notwithstanding the fears which have been expressed of a short honey crop, caused by the backwardness of the season and unusual cloudiness prevailing in May and June, Mr. Harbison yesterday informed us he now expected to produce altogether from his various apiaries quite as large a crop as the largest he ever produced heretofore, which was over 100 tons, believed to be the largest amount produced by bees owned by any one man in the world in a single year.

SAN JOAQUIN.

FIXING FOR VOLUNTEER.—*Independent*: Mr. L. Hickman, near Oakdale, has rigged up a brushing apparatus, made by cutting a number of tough oak saplings about 20 feet long, with the limbs and leaves all on, and fastening their butt ends to a piece of scantling, placing them about six to twelve inches apart. This is dragged by a four-horse team over stubble fields, and weighted a little, if necessary. The brush threshes out all the heads left uncut by the headers, beats down the stubble and scatters the grain uniformly over the ground. A little seed is added in spots requiring it, the field is harrowed with an ordinary harrow and is then ready for next year's crop. The brush will go over about 20 acres a day, although they work from 9 A. M. to 4 P. M. only, in order to have the heads entirely free from dampness, that they may shell out well.

SAN MATEO.

SQUIRREL KILLING.—*Times and Gazette*, Aug. 24: The Board of Supervisors last Monday virtually decided not to make squirrel inspector districts, not to appoint squirrel inspectors and not to raise any tax for the squirrel kill this year. This may not be regarded as irrevocably settled, but it is not probable that the decision will be receded from. They were led to intimate such a result from a desire to curtail expenses and to make the tax levy as light as possible this year. Taxes will necessarily be heavy in any event. The storms of last winter created such destruction upon the highways that a large expenditure has been necessary to put them in repair, which has caused drafts upon the incoming road fund of December to be anticipated to a considerable amount under the law. If no squirrel fund be raised farmers must make organized efforts of their own in fighting the common enemy. The expense will be no more if they can only get up a unanimity of action so that all shall perform a share of the work.

HARVESTING.—Harvesting on the coast is greatly retarded by the heavy fogs, which are thick every morning and night, and the farmers in consequence can only put in a few hours' work each day at the utmost. Threshing was begun on the Denniston ranch Tuesday, August 20th, with John Shouts' machine. The potato crop is nearly a failure.

SANTA BARBARA.

WOOLLY APHIS.—**EDITORS PRESS:** The woolly aphis which have been spreading among the apple trees for the past two or three years, have gone away or suspended operations for a time. I fought them with nearly all the missiles I could hear of, but stay they did until two or three months ago. I have noticed also that other orchards that were infested appear to have a rest from them. We hope the pest will not appear again, as I think it a serious enemy to our apple trees, and one very hard to exterminate, as they infest the roots as well as the branches.—O. N. CADWELL, Pomona's Retreat, Carpinteria, Cal.

SONOMA.

HOPS.—*Healdsburg Flag*, Aug. 22: At our hop yards the vines are in blossom and everything seems to portend an abundant crop; picking will begin September 2d.

MILDEW.—O. L. Soules, whose place is on the north fork of Mill creek, four miles west of town, has a vineyard of many varieties of grapes, nearly all of which are now more or less affected by mildew, causing a loss of about half the crop. This is the second case we have to report this year. As we go to press we learn that the grapes on Isaac Long's place, Big Plains, are badly mildewed, and that it is doubtless general in that section.

TEHAMA.

LARGE LAND PURCHASE.—*Napa Register*: John Finnell, one of Napa's princely farmers, has recently purchased 19,000 acres of land in Tehama county, at a cost of \$350,000. The property is known as the Thorns estate, and has on it a \$25,000 residence and about \$100,000 worth of fencing. With the land and improvements, Mr. Finnell gets 2,200 head of cattle, 1,200 hogs, and a lot of horses, mules, etc. This entitles Mr. Finnell to a place in the front rank of the great farmers of California. His home place in this valley, comprises 1,000 acres, and besides keeping 500 acres of it under a high state of cultivation, he has for the past four years been paying \$35,000 per year rent for a large tract of farming land in Colusa county, from which he has derived a handsome income. We understand it to be the intention of Mr. F. to remove with his family to his new place in Tehama county next spring. The new property has never been put under the plow and it is thought will prove very productive.

TULARE.

GRAIN.—*Delta*, Aug. 22: Immense quantities of grain are being hauled to Visalia, Hanford, Lemoore, Grandview, and all shipping points in the county. From recent accounts the wheat crop is found to be much heavier than was at first calculated on, and the quality of the crop raised in this valley is equal to any raised in the State. The season has been a favorable one in every respect for allowing grain to mature fully, and much that has been raised here this year is equal to the best we have ever seen. Some wheat sold here has brought \$1.34 and \$1.35, a price that will compare favorably with any sold at an equal distance from market.

STOCK DYING.—Reuben Moore, who follows the business of attending to stock, and whose business ranges mainly in Tulare and Fresno counties, tells us that cattle are dying in large numbers from murrain, and we see by the papers that large numbers are dying on the Fresno range of Miller & Lux. Moore says that the first sign of the disease is the raising up of the hair on the animal's back. Their backs also become greasy, as if the sun had fried it out of the system. Where these indications appear the animal ceases to eat anything, and dies in a few days. Senator Fowler, we hear, is losing large numbers by this disease, on the north side of the county. Owing to the prevalence of this disease, it might be well for our market men to be on their guard for diseased meat.

YOLO.

WHEAT FOR SEED.—*Mail*, Aug. 24: A few of the farmers of Yolo county are the possessors of fine plump wheat, and they propose to hold it for good prices, as it will be in demand for milling. We presume they will realize something handsome in comparison with the usual grade of this year, and it will certainly be in extra demand.

YUBA.

THE DISTRICT FAIR.—*Marysville Appeal*, Aug. 24: The prospects for a successful district fair have never before been so good at this time of the year as they are at present. The exhibition of horses this year will be extraordinarily good and will include all the celebrated horses on the coast. In addition to the races there will be an exhibition of farmers' and mechanics' products, as the State gives \$1,500 in premiums for the same. This money must be expended for this purpose, and we mean to make it our business to see that not a cent of the amount goes to horse racing. We therefore urge the farmers to select their wheat, barley, corn, potatoes, fruits, etc., and that the mechanics get ready with their handiwork for show at the pavilion. If they will mind their own interests they will not wait for a second invitation.

Colorado.

MR. SIZER'S ORCHARD.—*West Los Animas Leader*, Aug. 16: Those interested in raising fruit and growing trees would be profited by visiting E. R. Sizer's place. We speak of it in the interest of the reader, not with a desire to "puff" Sizer. An examination of his trees and vines will demonstrate almost to a certainty what it is safe to plant. He has about 1,000 grape vines, two years old. They are looking as well as grapes do anywhere. Some of them have begun bearing, and a practical vine grower who looked at them last week, thinks they can be made to produce half a bushel to the vine next year, and a bushel each year thereafter. The reader can figure the profits for himself. Grapes are selling here at from 15 to 30 cents per pound. Sizer has from 100 to 200 plum trees of the Chickasaw variety and a number of crab apple and cherry trees, all of which are in a most flourishing condition. The Chickasaw plums have from one to two quarts of fruit each on them this season and will be in full bearing next. Of wild plums he has hundreds more, and they too are bearing.

Utah.

WHEAT.—*Tribune*, Aug. 22: The music of the threshing machine is heard throughout these valleys of the mountains. The yield of wheat is fully as large as the first estimates and the crop is larger than ever before produced in Utah.

Washington Territory.

WHEAT CROP.—*Walla Walla Union*: The dry weather has had a bad effect on the grain crop. Threshers and others who have had an opportunity to judge claim that the average yield will only be 20 bushels to the acre this year. No one so far has estimated the average

at smaller figures. One field of spring wheat reported, located on light bench land, which only turned out eleven bushels to the acre. The fields along the foot of the mountains are sending from thirty to forty bushels per acre, through the machine. But little of the grain is as plump as that raised last year. Fall sown grain as usual produces a much larger crop than spring sown. Notwithstanding the reduced average yield, the total product will be greater than last year, because there is a much larger area to be harvested. The assessor in 1877 returned 28,625 acres in wheat in Walla Walla county. The best judges, the threshers, all unite in placing the average yield of wheat last year at over 30 bushels per acre, which would give a total product of \$58,750 bushels. This year the same officer returns 46,580 acres in wheat, nearly one half more. Say the average yield will be 20 bushels per acre and we have a total product of 937,000 bushels. There is no reason to doubt that the same or a greater ratio of increased acreage can be extended over the wheat producing regions of Umatilla and Columbia counties, while Whitman county will doubtless show over double the acreage of last year. Wheat is dull at 45 cents per bushel.

News in Brief.

REVOLUTION is threatened in New Grenada. A worm is destroying the turnips in Kildare, Ireland. A GREEK has attempted to assassinate General Todleben. The silver mine at Ikuno, Japau, has entirely petered out. HOP-PICKERS are wanted in the vicinity of Healdsburg. ONE thousand Philadelphia iron mills men have struck. The San Jose gas company furnish gas at \$1.50 per 1,000 feet. OREGON grain this year will average 62 to 63 pounds to the bushel. THE fare from Bodie to San Francisco by the Sonora stage is reduced to \$26. THE Masouie Savings and Loan Bank of San Francisco has failed. EXTENSIVE canneries of halibut have been established on the Straits of Fuca. THE coal production of China has already reached 3,000,000 tons annually. THE army worms have disappeared from the Central Colony, in Fresno county. SONOMA and Marin potato crops are thought to promise a good yield. THE Mikado has opened the new buildings of the Tokio Engineering College. FIRST-CLASS carpenters at \$3 per day are wanted at the New Almaden mines. ORANGES equal to those of Los Angeles are grown in the Tulare county foot hills. THE Alaska Gold and Silver Company has 250 tons of \$40 ore ready for crushing. REPORTED serious Indian troubles threatened at Priest's Rapids, on the Columbia river. THE greater portion of Utah's surplus wheat crop will probably find a market in Europe. THE distribution of prizes at the Paris Exhibition has been postponed until October 20th. IN Belgium there are 460 persons to the mile; in the United States, 12. The Belgians live fairly. UP to the present month, 31 wheat-laden vessels have cleared from San Francisco for Great Britain. THE Salt River *Herald* wants artesian wells tried on the desert north, east and west of Phenix. FRESH Russian troops hurry to replace those leaving Constantinople. What does this mean? THE Monterey *Democrat* reports that a species of louse is damaging the orange groves at Paraiso Springs. THE number of horses killed for food in Paris during the first quarter of 1878, was 2,341, with 106 asses and 14 mules. TEXADA marble has been dressed and polished in Victoria, and shows a fine grain and smooth surface. HELEN TAYLOR, the step-daughter of John Stuart Mill, is proposed for a seat in the British Parliament. THE Chicago shoemakers and manufacturers have come to an amicable agreement, and the strike is over. ONE hundred and seventy thousand vine stocks in Malaga district have been attacked by phylloxera. TWO employees of the Pacific refinery have stolen \$15,000 worth of granulated silver and gold bullion. IN Paris there are 43,662 families, comprising 113,317 persons, who receive relief from public charity. THERE is said to have been an important discovery of gold diggings in the Shoshone mountains, Montana. TUNIS is about to acknowledge the suzerainty of and to conclude an offensive and defensive alliance with Italy. CONNECTICUT used Paris green to kill potato bugs. The rains carried the poison to the rivers and killed the fishes. IT is stated that a new Turkish loan of £5,000,000 is in contemplation, to be guaranteed by the British Government. SIR GEORGE NARES, the Arctic explorer, is about to survey the dangerous parts of the Straits of Magellan. THE heavens at Hells town, according to the *Chico Record*, have showered down manna in the shape of fishes.

THE Moore murder trial cost Ventura county about \$8,000.

HELENA capitalists will build a tramway around the falls of the Missouri.

A NEW Russian 5% loan of 300,000,000 roubles, issue price 93 cents, is announced.

EACH offense of smoothing, cutting or boring silver dollars will require \$1,000 fine.

THE wool clip of Josephine county, Oregon, will amount to 25,000 pounds this year.

A BLACK bug is destroying the potato crop in the vicinity of Prescott, Arizona.

ON August 26th ground was broken for the south lateral drift of the Sutro tunnel.

J. L. SMITH, of Louisville, claims to have discovered a new element, "mosandrum."

THE total product of Mexican mines from 1535 to 1877, is estimated at \$4,067,119,321.

IT is estimated that property in Bodie has increased 50% in value in the last three months.

SILVER has been discovered eight miles north of Colorado City. The ore assays \$65 per ton.

A HUMAN body ticketed from the planet Mars, has been found in an aerolite from Peru.

GLASS blowers in Wheeling, W. Va., have struck because a man withdrawing from their Union is not discharged.

A RAILROAD party is now surveying a route from Benton toward the Snoqualmie Pass, Washington Ter.

A BREAD-FRUIT tree has been acclimated in the State Capitol grounds at Sacramento, and is now in healthy bearing.

PREPARATIONS are being made for the four-day National Soldiers' Re-union at Marietta, Ohio, beginning September 3d.

AT the University of Oregon free tuition is given one student from each county and one for each member of the Legislature.

A LARGE carp pond is in the course of construction on L. D. Latimer's ranch, two miles east of Windsor, Sonoma county.

AUSTRO-HUNGARY may export this year: Wheat, 13,000,000 quintals; rye, 2,500,000; barley, 4,000,000; oats, 3,000,000.

DEER slaughtering is progressing at such a rate in the northern counties of California as to threaten the extinction of the species.

WORK has been unexpectedly suspended for a time on the great Brooklyn bridge. Cause, failure of the two cities to provide funds.

A MAN named Shepplar and his "pard" have struck an immensely rich gold quartz ledge on Dog creek. The ledge is four feet wide.

TURKEY wants England to accept the Cyprian revenue as security for a loan with which to carry on reform.

FOR a long time the temperature in the face drill holes of the Sutro tunnel has been 110°. The stratum is about 1,000 to 1,600 feet deep.

DURING the past year the United States Land Department of California surveyed 157 miles, containing about 3,240 acres, making 381 maps.

INFORMATION with regard to pre-emptible land in northern California can be obtained at the Humboldt, Shasta and Susanville Land Offices.

THE bullion product of the Black Hills for the year 1877, was nearly \$4,000,000, and will not fall short of \$8,000,000 for the present year.

THE recovery in trade is generally satisfactory, although several commercial centers, notably Manchester and Glasgow, still complain.

IT is reported from Deadwood, D. T., that the California company have purchased the Old Abe, Palmetto and American Flag mines, adjoining the Homestead.

AT Negaunee, Mich., the works of the Miners' Powder Company exploded Aug. 22, doing terrible execution upon buildings, fences, glass and trees, and killing five men.

DURING the week ending August 20th, 54,976 pounds of sulphur and 36,360 pounds of quick-silver were shipped from Calistoga to San Francisco.

BIAGGIO GUERRERO has struck a ledge in the Columbia mine, near Wells-Fargo, at a point 110 feet from the surface, which assays from \$12 to \$19.

GORHAM BLAKE, of Boston, has seven ledges containing pay rock in Georgia. He has lately visited this coast to study improvements in mining.

AN artesian well on the Norris ranch, Sacramento county, is now down 1987 feet, and the stratum of soapstone which has already been bored through 400 feet, still continues.

AT the annual meeting of the shareholders of the Swiss Mining Company, the following officers were elected: N. Giamboni, president; A. Decourtioux, treasurer; A. Sbarboro, secretary.

A CONGRESS of Industry and Commerce met August 20th, the President of the Paris Chamber of Commerce being Chairman. Delegates from England, the United States, Belgium and Russia were appointed Presidents.

BRITISH wreck register for year ending June 30th, 1877, reports: Wrecks and collisions, involving total loss, 511; involving partial loss, 3,653. The average for the past 10 years has been 2,417 vessels.

HENRY JOHNSON thinks he has found a meteorite. It will weigh at least 1,800 pounds, is of a dark gray color, oblong shape, and is smooth and rounded like a boulder. Location, five and a half miles north of Virginia City.

ON August 22d, Capt. W. E. Judd, foreman of the Keystone mine, fell 65 feet to the bottom of the mine and sustained injuries from which he has since died. The careless connection between the cable and the lowering tub caused the accident.



Before and After Marriage.

BEFORE.

She waits and listens. Footsteps fall;
She knows they are not his.
She waits and listens for a sound
That sweetest music is.
He comes, and with a sudden thrill
And heartbeats loud and clear,
She does not hear, she does not see,
She feels that he is near.
And coyly lifting to his face
Her eyes of heavenly blue,
She murmurs, in love's softest tones,
"My darling, is it you?"

AFTER.

Again she listens. Footsteps reach
And footsteps pass her door.
She listens; but her needle flies
More swiftly than before.
She hears at length the tread that time
And cares are making slow,
And with a start that sends her chair
Hard rocking to and fro,
Springs to the landing, and with voice
More shrill than any lute's,
She screams, above the balusters,
"Augustus, wipe your boots!"

—Philadelphia Times.

The Story Writer.

I am an editor; and one bitter cold morning, a few days before Christmas, in the year 18—, I sat as usual at my desk. Among the heap of manuscripts I was daily compelled to examine, many of them desultory, untidy and unstitched, defiant of spelling, subversive of grammar, and with neither beginning, middle nor end, was one written on the softest cream-laid French white paper, in a childish lady's hand, on lines which had been carefully erased afterwards. It was a little story of no great literary merit, but there was an aroma of youth and sweetness in every line. There was a promise in it. It was like the light in the sky before the sun had risen on a fine day, an omen, a portend of sunshine and warmth, but no more. I put it down as if I had touched the petal of a rose. There was a tiny scented note beside it, of course, full of italics:

"Dear Mr. Editor: I send you a little story. I am only 16, and papa and mamma do not know anything about it, but please tell me if it be worth anything. I want it to be printed; I want to be paid for it. It is not for myself, though, but I want the money to give my dear little brother a nice little birthday present. I am, dear Mr. Editor, yours, etc.,—EMILY—"

Then came the address and signature. The writing of the note was less neat and regular than the manuscript. But there was the same fragrance of dainty youth about it.

I held it a long time in my hand. I am an old man; at all events middle-aged, perhaps something more; but my heart is younger than my appearance. Little distillations came, or seemed to come, from the paper I held. It was with no common feeling of interest that I sat down and wrote my answer to the note. I returned the manuscript, but I wrote gently and tenderly. I gave it as my hope and my opinion that, with a little more care and study the youthful writer would achieve a success. I even promised to print that identical manuscript if it were a little revised or corrected, and I pointed out how it might be made available. I opened the window of my den after I had written my note. The weeds piercing through the flags below had a less dreary look than they had ever had before; a gleam of sunshine shone on them, and their frosty verdure borrowed something of Piccola brightness from it. I posted my letter and the manuscript to the address named, and went home, wondering if ever I should hear from the writer again. With that, however, all thoughts of the manuscript passed away. The author was too timid to reply.

On Christmas eve I was asked as usual to dine with an old friend of mine at St. John's Wood. He was a married man, with a pleasant comely wife, and several small children, male and female.

"The children are not coming down to dinner," said my hostess, "for they are going to give us a surprise afterwards."

I bowed and was delighted, both at the anticipation of pleasure to come, and of privation for the first time of considerable present annoyance. I need not say I was then a bachelor. When we went up stairs after dinner, we found the folding-doors which divided the front from the back room closed.

They were opened after awhile. The Christmas hymns were sung, and a tree of the most brilliant splendor was revealed; on its branches were hung gifts, worked and embroidered by the children for their parents. The three little girls and their governess had done it all.

While my friend and his wife were embracing and thanking the children, I had time to notice the governess. She was very young, almost a child herself. A mass of bright hair was gathered up in great waves at each side of her head, and fastened in a loose thick loop behind. The bright curls were so arranged as to reveal the ear. The ear and cheek were, I

should rather say they are, like those painted by Leighton in his "Painter's Honeymoon." Need I say more of their ravishing loveliness? But the pretty blue eyes looked as if they cried a great deal, and there had been recent tears, for the eyelids were somewhat swollen. She was not sad, however, for she played on the piano for the children and for me, their old godfather, to dance to, and she joined with us in a game of blind man's bluff. When the children retired, she retired also.

"What a charming person," I said.

"She is most excellent," said my friend.

"Although she is so young, Miss— is the bread provider of her family. Her father and mother have, according to the exact phrase, seen better days; in fact, they are people of good birth, and once had a good fortune. They have a son and daughter; the son is a fine fellow also. Both the son and daughter give the greater part of their earnings to their parents; but the son has not been very fortunate. My little governess, she is only 17 (my children are so young they do not require a prim regular governess), does more with her salary mediocre as it is, than her brother can do with his hard work. He is a clerk in a bank."

"And she helps him also, I suppose."

"I dare say she does, but I have never inquired, for she is full of reticence and reserve on these points. I only know she would set up all night, and work like a horse all day, to help both her parents and her brother. She is going home to-morrow; and he, I fear, cannot afford the expense of the journey. The parents live now in Scotland."

"Could we not help him?" I said bashfully.

My friend smiled. Both brother and sister spent Christmas at home.

My good fortune threw me a good deal after this with my friend's governess. Must I say from that Christmas eve I was never heart whole?

The following Easter we were engaged, and before the Christmas eve which followed we were married. What an aim and a hope my life has now acquired!

We have a little suburban home, and I leave my wife every morning to pursue my editorial labors, and return every evening, forgetting my work and my worries, knowing that the sweetest heart and the fairest face I have ever known await me in my modest but happy home. I never heard again from the author of the manuscript which had so much interested me; and, truth to tell, had never thought of her since that Christmas eve. Two or three years have passed since then, and we have two babies.

Their mother is always playing with them. She often puts her delicate, slender white hands under my baby girl's foot, and the baby makes believe to stand on it. What a picture it is; it is like a rose-bud laid on a white emerald.

As I walked up and down the room, reading a scratchy, scrawly manuscript, and fumbling over it in desperation—for the tiresome person who had sent it had, by some ingenious carelessness, muddled it of its last page—my thoughts flew far and wide, and, by some association I cannot attempt to explain, the pretty manuscript from the youthful writer who had sent me no more, was recalled to me.

Unconsciously the manuscript I held faded from my mind, and the other was present with me. Wondered what had become of her; had she written any more, where and how was she?

Every moment I became more and more possessed with the memory. I was so happy myself that I felt for all who seemed to have care and struggle in their lives. I looked out the address to which I had written before, and wrote to the unknown a few lines. I said that time had passed, that the youthful inexperience which had prevented the paper she had sent from being accepted, must now be corrected, and that I should be glad and willing to see anything else she had written, if she had written anything since then.

Within a few days I had an answer. The writing was in a feigned hand, quite unlike the round, hesitating, girlish hand I remembered. The words were, however, as sweet and innocent as the first had been. The note ran as follows:

"It is good of you to remember me, but I do not write any more. I am so happy. I have a good, noble husband. [Oh, these womanly exaggerations, I thought, as I sat in my editorial chair.] And such darling babies! I wrote, for I wanted to help my dear ones, but they have been better helped by others than I could ever have hoped to help them. God has given them a better friend than I could be. If you seek to know me, you shall do so. If when you go home you see a woman with a rose in her hand, hold out yours. You will know me."

I smiled at the romantic fervor of this reply, and a faint desire arose that my wife and the writer of the letters should know each other, and then I went on with my stupefying avocations.

As I went home, I confess I looked about for a woman with a rose in her hand, but, as might naturally be supposed, neither in cab nor omnibuses did such an apparition manifest itself.

As I entered my own door I gave an impatient shrug at the idea of having been the subject of a foolish jest. But whom did I see standing within the threshold of my home? My darling, with her fair, child-like face and bright hair; love, and joy, and youth crowning her with a triple crown, and in her hand was a rose!

"Dear husband," she said, as I kissed her, "I think I loved you from the moment I had your kind, indulgent, thoughtful note. I had written that absurd little story for I sadly wanted a little money to pay for Gerald's return home at Christmas, to be with papa and mamma, and I had a foolish notion I could write."

"And you were disappointed my pet. What a savage I must have seemed!"

"No; I felt how foolish I had been, and I cried heartily, but I thought you good and kind all the same. And Gerald got home, too, and we had a happy Christmas after all."

I kissed her.

"But are you never going to write a story for my magazine again?"

"I do not know," she said archly. "Meanwhile, you can write ours, if you like."—English Paper.

A Preventive of Suicide.

We lately had a paragraph from distinguished Eastern students of insanity to the fact that suicide was not necessarily the result of insanity. Dr. G. A. Shurtleff, the able Superintendent of the Insane Asylum at Stockton, in a paper on Suicide read before the San Joaquin County Medical Society, bears the following testimony to the influence of religion as a preventive of suicide:

"There is nothing which, in contemplation of the final hour, so solemnly and profoundly affects man, or so surely influences his acts, as an unquestioned and steadfast belief in what concerns his condition beyond this brief, mortal life. This is religion, and if born and trained in its faith, it becomes an organized element of his mind, an acquired instinct, which is more likely to direct his thoughts and acts in these matters than ought which depends solely on the logic of human evidence and knowledge. Through this faith a belief in things unseen and not of this world, which lie beyond the reach of science, of human reason and of natural evidence, is established. The weapons which would assail it are human and of the earth, and do not extend to the mysteries of another world, which are seen only by the eye of faith. This professed belief itself must be insincere and a false pretense if it fail to exercise, in the same mind, control over the conduct of him who avows it."

"I can say positively, from my own extensive observation, that the precepts of the Christian religion, especially as taught in their long-established forms, exert a strong influence even in the disordered as well as the rational."

A WOMAN'S CLUB IN WARSAW.—A few months ago a number of ladies of high rank in Warsaw formed themselves into a sort of a club, with a view to diminish the extravagant style at present in vogue in dress, and the high prices paid for it, as well as to discountenance the continued and ever-varying changes which, introduced by the modistes and dressmakers, are without artistic value, and are generally devoid of the elements of picturesqueness and beauty. The principal rules of the club are, first that no member should give more than a sum equivalent to five pounds for a morning dress, 10 for an evening dress, and one guinea and a half for a bonnet. Second, that at each quarterly meeting each member should be able to show some useful achievement in writing, reading, drawing or needlework, with the great end in view of promoting the objects of the society in their efforts towards picturesque, useful, and economical dress.

LOCKING PLATE FOR NUTS.—A very simple locking plate for nuts has been invented by James Finney, of Braintree, England. A small pin is fixed a short distance beyond the nut. A circular plate, divided equally by 17 notches, fits easily over the nut in any of its six positions. The principle of the invention is the same as that of the vernier scale. As there are 17 notches in the plate it follows that three of them represent just one-seventeenth of one side of the hexagon nut; so that if the plate be moved round three notches, it will not fit unless the latter be moved round a distance equaling one-seventeenth of one side of the hexagon, or a distance which equals the one hundred and second part of a whole turn. The cost of the plate is small, as it can be made with sufficient accuracy of cast iron.

PHOTOGRAPHS ON SILK.—Messrs. Allard & Gupot, silk manufacturers, of Lyons, are introducing a new industry—the production of photographic impressions on stuffs. They sent to a recent meeting of the Photographic Society several pieces of silk with a variety of photographic pictures printed on them—among others, some large medallions representing pictures of the old masters. These specimens are no less than 40 meters in length. The process by which they are produced is not given, but there is reason for believing that the prints are made with salts of silver. But however that may be, this application of photography, which, ever since the discovery of the art has been sought after and made the object of numerous, more or less successful, experiments, appears new to have been successfully realized.

A girl in Paris has lately been hugged to death—24 fractures in the upper part of her body. She died happy—if she loved him.

Overworked Women.

Here is a woman who from dawn till dark is busy with the actual work of a household, with its cooking, sweeping, dusting, mending and general toil. There is never one working consecutive hour in which she can, without a sense of neglected duties, rest absolutely. She spends day after day in the seclusion of home, without anything sparkling and merry to inspire her, with no very ennobling thoughts, except in the direction of religion, and her religion is too often a compound of ascetic self-denial and sentimental fervor, rather than of high principle and holy love. When she is unequal to the performance of her tasks, she takes tea, and as her nerves become more diseased, more tea. With neuralgia pain often seizing her in the beginning of that slow decline which saps the life and happiness of so many of our women before they reach middle age, she is irritable. Little trials cause her torture, and as she sees herself constantly falling below her ideal, she loses heart, thinks herself a miserable sinner, and very likely doubts her claim to the name Christian. Doubtless she will gain spiritual help by praying, but she had better confess to a physician than to a clergyman. She does not bear petty crosses with unflinching sweetness, and perhaps says many a hasty word of which she repents, only to repeat the fault again and again, despite her prayers and struggles. What ails her is not temper, but tiredness, and tea, and too hot rooms, and a lack of variety and cheer in her life. Doubtless God could keep one in a holy and patient frame of mind who constantly violated every law of health, but there is not the least warrant for believing that He ever did or ever will do so, because if human suffering means anything, it means that we are to learn by it, not only spiritual truths, but that the soul and body are like yoked oxen—if one lies down the other must, or be sorely cramped. No delusion is more common than that illness is conducive to saintliness, and that God sends sickness upon us to make us holy. On the contrary, sickness is the penalty of wrong doing, either by ourselves or our ancestors, and in many cases should make us ashamed and truly penitent. The most devout Christian will have the nightmare if he eats half a mince pie before going to bed, and a crusty temper next morning, and his spiritual agonies will not save him in the future, unless he adds to his faith, knowledge.—Woman's Journal.

ON FORCING CHILDREN.—Above all things let my imaginary pupil have preserved freshness and vigor of youth in his mind as well as his body. The educational abomination of desolation of the present day is the stimulating of young people to work at high pressure by incessant competitive examinations. Some wise man, who probably was not an early riser, has said of early risers in general that they are conceited all the forenoon and stupid all the afternoon. Now, whether this is true of early risers, in the common acceptation of the word, or not, I will not pretend to say; but it is too often true of the unhappy children who are forced to rise too early in their classes; they are conceited all the forenoon of life, and stupid all its afternoon. The vigor and freshness, which should have been stored up for the purposes of the hard struggle for existence in practical life, have been washed out of them by precocious mental debauchery, by book gluttony and lesson bibbing. Their faculties are worn out by the strain upon their callow brains, and they are demoralized by worthless childish triumphs before the real work of life begins. I have no compassion for the sloth, but youth has more need for intellectual rest than age; and the cheerfulness, the tenacity of purpose, the power of work, which make many a successful man what he is, must be placed to the credit, not of his hours of industry, but to that of his hours of idleness in boyhood. Even the hardest worker of us all, if he has to deal in anything above mere details, will do well, now and again, to let his brain lie fallow for a space. The next crop of thought will certainly be all the fuller in the ear, and the weeds fewer.—Prof. Husley.

WOMEN'S SOCIETIES IN BERLIN.—Die Frauen-Verein (women's societies) of Berlin, owe their existence to the thought, continued effort, and patronage of that most lovely and philanthropic of women, Louise, Grand Duchess of Baden. They have for their object, the furtherance of women's interests in every direction. Their aim is to reach and benefit all classes. They include higher education in art, science and professions; a thorough training of nurses, teaching of needlework, all kinds of handicraft and house service; the opening of remunerative employment for all kinds of skilled labor, the organization of labor, the organization of charity. The associations are numerous and have already accomplished so much actual good, that pauperism may almost be said not to exist in the Duchy of Baden.—The Alpha.

HOW TO MEET A DOG.—A gentleman gives the following advice in relation to dogs: "If," says he, "you enter a lot where there is a vicious dog, be careful to remove your hat or cap as the animal approaches you; hold the same down by your side between yourself and the dog. When you have done this you have secured perfect immunity from an attack. The dog will not bite you if this advice is followed. Such is my faith in this policy that I will pay all doctors' bills from dog bites and funeral expenses for deaths from hydrophobia."

Chaff.

COMING in with the tied—attending an "in-fair."

FISHING is mostly net profit—when you don't hook 'em.

TAKE care of the poor Indian and he'll take hair off the white man.

THE diameter of the sun is immense, but the moon makes a lid for him.

MORTGAGES are usually raised by the sheriff and harvested by lawyers.

If you are straightened in circumstances don't get crooked in the back.

CARPENTERS are nearly all counter-fitters, and some are the worst we know.

It's a wise joke that knows its own father—when the printers get through with it.

PUNCTUATION was first used in 1520, though puncturing was in vogue many years before.

ON account of hard times, portmonnaies are worn smaller in size and trimmed with silver instead of gold.

IN the East there has not been an arrest for drunk for two weeks. All cases are set down as sunstroke.

A YOUNG man and wife recently passed through Cheyenne on foot for this country. Tourists, of course.

A PHYSICIAN was badly hurt by the caving in of a well. He should have attended to the sick and let the well alone.

THE Boston dip and sheep dip are not one and the same article. The one is a luxury and the other a staple article.

A MICHIGAN widow recently hid her cow away under the hay to save it from the tax collector. This may be called a genuine case of cow-hiding by a female.

A JAPANESE has taught a bug to play a flute. California bugs telephone new arrivals to each other over the bell wires.

THE harbor police are still fishing—for Chinamen. Gill-nets would be the right thing to catch them with, with sliding meshes.

"SEVEN-UP" is game to the last, and wasn't taken in by the Bannocks. He has "turned up" all right and is prepared for a new deal.

THE difference between ladies and ducks—if there is any difference—is that the ladies are often dressed to kill, while ducks are killed to dress.—Graphic.

DR. CAMPBELL, of Ohio, after 14 years coughing has coughed up a fish bone, and feels better. A bone needle, likely, and the result of reading Scripture backward.

REPORTS say that an Indian agent has been killed by the redskins. Retributive justice! Yet if Congress were in session it would adjourn in respect to his memory.

JOKES on hot weather afford our country brothers of the quill abundant fun; but in this climate, one can't even get off a hot joke with the aid of a coal-oil stove.

"CAN I ask a few questions concerning the celebrated Damascus steel?" is the way a correspondent begins his letter. Certainly; we don't care a Damascus anything you want to.

WOMEN were never made to carry parasols, or they would have been constructed tall enough to keep the points of their sunshades from plowing into a man's silk hat or poking his eye out.

POPULAR science says that charcoal has not yet been liquified. It is an even bet that before the year is out, "extracts of charcoal" will be offered as a specific against sunstroke and yellow fever.

A POLITICAL speaker accused a rival of "unfathomable meanness," and then rising to the occasion, said: "I warn him not to persist in his disgraceful course, or he'll find that two of us can play at that game!"

LITTLE Johnny ran into the house the other day while the mercury was hugging ninety-five degrees, with the perspiration streaming from every pore, and shouted: "Mamma! Mamma! fix me; I'm leaking all over."

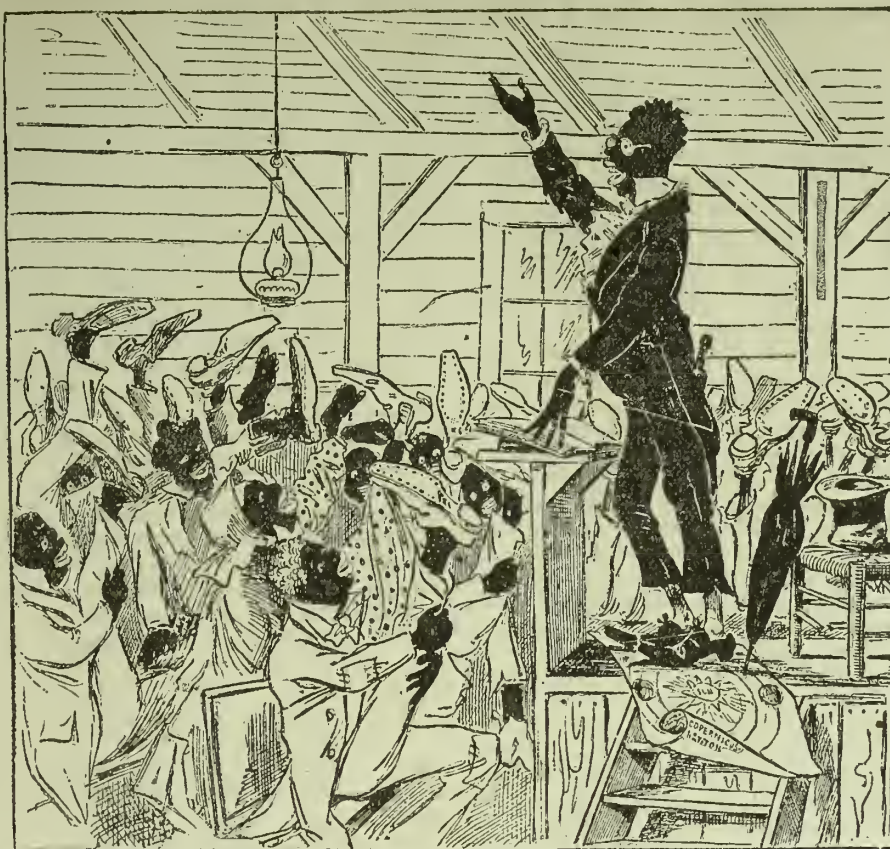
AN obliging editor publishes this: "If any subscriber finds a line in his paper that he does not like and cannot agree with, if he will bring his paper to the office and point out the offending line, the editor will take his scissors and cut it out for him."

WE heard a man complain about the weight of his baby the other day, and to our certain knowledge that same man used to hold the mother of that baby in his arms cheerfully, hour after hour, after the fond parents of said girl had gone to their virtuous couch.

"GEORGE," she said to the perspiring young man, "I love you just the same, but as our city relatives are coming next week, mother thinks you'd better stay away, because your long hair and freckled face might make them think our acquaintances weren't very big-toned." The young man is staying.

EDISON has invented a machine for condensing the noise of the elevated railways of New York, running it down a pipe to the Battery, loading it on the Sound steamboats and dumping it near Brattleborough, Vt. Great man, that Edison! The Brattleborough people expect to can the noise and sell it for Fourth of July celebrations.—Philadelphia Bulletin.

AN obliging gentleman, who thinks that personal favors do not cost much, while they make friends, was applied to by a negro for a certificate of character, by which he might get a situation. The testimonial proving to be more complimentary than Scipio himself expected, that worthy, on recovering from his astonishment, exclaimed: "Say, Mr. —, won't you gib me something to do yourself on 'dat recommendation?"



THE OVERTHROW OF THE COPERNICAN THEORY.

"Now, Bredderin', habbin' demenstrated dat de earf an flat and dat de philosophers an all humbugs, I call upon all de bredderin' here what an unanimous in opposition to de Cornucopian feery to signify sayin' aye by a raisin' ob de left foot.—N. Y. DAILY GRAPHIC.

Young Folks' Column.

The History of Our Chicks.

Written for the RURAL PRESS by TOTS, aged 11 years.

Now, young folks, come and listen to a nice story. Once upon a time I had a nice speckled hen, who hatched a brood of chicks. They were the sweetest little things you ever saw. Her name was Bettie. Well, I am going to tell you about the first brood she had. They grew up very happy till Bettie wanted to set. So the chickens were very good, except two cocks who were always quarreling. When the youngest one wanted to crow, the elder one would peck at him; and so it went on till Bettie came out with another fine young brood of chickens.

We set her on 13 eggs and she hatched 12. Now, don't you think that was very good? That was the second brood in one summer. My mother often said she was worth her weight in gold; and I think she was. So she strutted about very proud of her new chicks; but her first brood picked the young chicks. It makes me sad when I think of how they picked one of the little chicks till it died; and we buried it in the garden. Then we had another brood of young chicks. But the hen was a silly old thing; she left her eggs and went in the wrong nest, and the eggs were nearly cold. We set her on 13 eggs, but she only hatched eight. That was not so good. But the cocks also picked one of them to death. They picked it so, that when I took it up I could not put it down; it died in my hand, and we buried it right beside the other one.

One thing I am glad to say is that Bettie is very kind to the other chicks, and often lets them eat from her beak.

Now I think that this story is long enough, so I must close with good-by, and some time I will tell you some more about our chicks.

A Boy's Letter from Mexico.

One of the young folks of the RURAL family has received a letter from a young friend in Mexico, which contains such important news that we must print it, so that all the young folks can read it. He writes as follows:

MERA FLORES, July 28th.

My Dear Friend:—The thunder is very bad down here. It comes so loud that it makes a fellow deaf, and the lightning falls down on the houses and burns everything. A man was going along the street, and the lightning fell right in the middle of his head and killed him. One lightning fell on a rock and made the pieces fly; some of them fell in the town and broke a whole lot of things.

I have a harpoon and go and catch fish, and as soon as I stick it into him, he pulls and jerks, but I get him right out and bring him home to cat. This is all I have to tell you, so good-by. RODERIGO.

THE latest cure for egg-eating hens is to cut off their bills. That closes the egg account with them.

DOMESTIC ECONOMY.

Cucumber Pickles and Tomato Catsup.

EDITORS PRESS:—A few weeks since one of your readers wished to know the best method of making cucumber pickles. I have been waiting, but as yet have seen no reply. The old-fashioned method is to put them in a barrel of strong brine and let them remain till wanted for use. Then to soak them in warm water for about a day, when they were ready for the vinegar. Served in this way they were always soft and spongy, and tastes no more like a cucumber than a green tomato.

My father's plan, as near as I can remember, is to pick them before very large, place them in brine for about 24 hours, then in a stone vessel, and cover with strong vinegar. In a day or two they were ready for use. If they show signs of spoiling the vinegar must be drawn off and fresh vinegar added. Pickles prepared in this way will taste like new pickles when a year old, and will be firm and solid as when first picked. All our visitors used to exclaim "what nice pickles!" "How do you keep them so nice?" "Do tell us how to make them." This being a different climate, it might be well to try but few at first.—J. M. M., Orange, Cal.

Tomato Catsup.

EDITORS PRESS:—In your last number of the RURAL PRESS, I saw an inquiry for a recipe to make good tomato catsup. As I have made considerable this season, and every one thinks it splendid, I will give the rule for it. To one peck of tomatoes, boiled and strained, add one quart of vinegar, five tablespoonfuls of salt, two of red pepper, four of mustard, one ounce of cloves, half an ounce of allspice; boil together three hours, or reduce one-half, then bottle for use.—MRS. C. S. CROSBY, Spring Valley, San Diego Co., Cal.

RESTORATIVE SOUP FOR INVALIDS.—Take one pound of perfectly fresh beef or fowl, chop it fine, add eight ounces of soft or distilled water, five or six drops of pure hydrochloric acid, 30 or 40 grains of common salt, and stir well together. After three or four hours the whole is to be thrown on a hair sieve, and the fluid allowed to pass through with slight pressure. On the flesh residue in the sieve pour slowly two ounces of distilled water, and let it run through while squeezing the meat. There will be thus obtained about 10 ounces of cold juice, possessing a pleasant taste of soup, of which a wineglassful may be taken at pleasure. It must not be warmed, at least not to a greater extent than can be effected by filling a bottle with it and standing this in hot water, since it is rendered muddy by heat, and deposits a thick coagulum of albumen with the coloring matter of the blood. If from any special circumstance, such as a free secretion of gastric juice, it is deemed undesirable to administer an acid, the soup may be well prepared by merely soaking the minced meat in plain distilled water. Children will frequently take the raw meat simply minced when they are suffering from great debility. One teaspoonful of such meat may be given every three or four hours.

THE BEST BAITS FOR INSECT TRAPS.—M. E. C. Carriere has lately been trying a number of experiments on the best baits for insect traps, and gives an account of them in the *Revue Horticole*. The results effectually disprove the truth of the old saying "that we may catch more flies with a spoonful of honey than with a gallon of vinegar." A number of glass fly-traps filled with different liquids, sweet and sour, were placed under some fruit trees which were subject to the attacks of flies and other insects. The traps were baited with honey, weak wine and water, beer and water, vinegar and water, pure beer, pure wine, crushed pears and water, and other liquids; and the victims were counted, after the traps had been exposed for three weeks, with the following results: The trap containing beer and water stood at the head, and contained 850 flies and other insects; pure beer stood next, with 631; the crushed pears, weak wine, and pure wine coming next, pure honey being at the bottom of the poll, with only 17 sufferers. No doubt the odor of the beer and water, which was in a strong state of fermentation, had a great deal to do with attracting the insects.

COOKING GREENS.—This is the simplest of dishes, and yet it is not always a well-served one. Greens should be properly boiled; the water should be soft, and a tablespoonful of salt added to a large-sized pot of it, which should be boiling hot when the greens are thrown in. It should be kept boiling until they are done, which can be told by their sinking to the bottom of the pot, and then they should be skimmed out as quickly as possible into a colander, so that all the water will run out. Press them with a small plate, and turn upon a platter; add a large piece of butter, and cut up fine. Serve smoking hot.

PIGEONS, ROASTED.—When your pigeons are cleaned, roll a good lump of butter in chopped parsley with pepper and salt; dust and baste your pigeons, if your fire be good they will be roasted in half an hour, serve them with a sauce of butter and parsley.

GOOD HEALTH.

COLOR BLINDNESS.—We recently had a paragraph on the subject relating chiefly to the color blindness of railway engineers. Investigations have lately been made by Professors Cohn and Magrus, of the sight of 5,000 children with the following results: Of 2,761 boys there were 76 who suffered from this blindness, or 2.7%. Of 2,318 girls, there was only 1 incapable of distinguishing colors. Further a curious fact was established. Among 1,947 Christian boys, 42 were unable to make this distinction, or 2.1%; among 814 Jewish boys 34 or 4.1%; among 836 Jewish girls, not one. These results seem to prove that in the case of girls color blindness hardly exists at all, and that among Jewish boys it is about twice as common as among Christian boys, though local influences might possibly affect the results. In this connection we note that M. Favre has lately been studying Daltonism in France, and he finds there are in that country more than 3,000,000 persons thus affected. The number of females affected is to that of males as 1:10. He says that nine cases of Daltonism out of ten may be easily cured in young subjects, the best mode of treatment being methodical exercise upon colored objects. Mothers should be careful to develop the chromatic sense in their children. Examinations and exercises in colors should be conducted in all schools, etc.

PAINLESS OPERATIONS.—The new antiseptic method of surgery which has but recently been introduced into this country, has been twice successfully tried at the Alexian Brothers' Hospital, Chicago, during the past two weeks. In each case a leg was amputated, and the patient rapidly recovered, experiencing no pain whatever from the use of the surgical instruments. The method of operation is as follows: The surface of the limb to be amputated is first sponged with a solution of one part carbolic acid to 20 parts water. The instruments are placed in a solution of one part carbolic acid to 40 of water. While the operation is going on, a spray atomizer throws a stream of a solution of carbolic acid, one part to 40 of water, into the wound. This makes the operation perfectly painless, and does away with the necessity for using chloroform or ether. The wound is then dressed with oiled silk saturated with sulphate of lead, which indicates the presence of sulphate of hydrogen by turning black, and shows whether the wound is suppurating. Six layers of medicated gauze are then placed over the wound, and the whole is covered with Mackintosh cloth.

THE STUPIDITY OF HIGH HEELS.—The absurd and ungainly practice of mounting the hinder part of the feet on stilts while the toes press the ground and bear the weight, is one against which it is not easy to write with temper. It does not need a knowledge of anatomy to convince the shallowest that the foot is forced into a wholly unnatural position and distorted, by the heel being raised and the body made to rest on the ball of the toes! It should be unnecessary to explain that this disturbance of the foundation throws the whole superstructure out of gear, and deranges every mechanical function.



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SAN FRANCISCO:
Saturday, August 31, 1878.

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The Week.

Again passing events call us to express heartfelt sympathy and sorrow at the suffering and death which have fallen upon the lower Mississippi country, and sincere thankfulness that not unto our shores has flown the evil bird of pestilence. All during the week and even now the deadly plague of yellow fever has been stalking among the cities and villages of Louisiana and Mississippi, and counting its victims by the hundred. Without nurses, without doctors, many suffering mortals have found death a relief. In answer to the call of our Southern brethren, the North and West have given freely, and the telegraph has delivered hundreds of messages weighted with kind words and kindlier coin to cheer and comfort the afflicted. Thus only can we help them; unless it be with prayers that the deadly darts be stayed. In the midst of our wide-spread health and unalloyed prosperity, we can but ill appreciate the crushing experiences through which our friends are passing, and yet as we read the telegraphic accounts of each day's death roll, how slight our little transient troubles seem. Here no tornados roll and here the atmospheric conditions are foes not friends of contagious diseases. It is true that to us is linked the reputation for an aqueous earth-crust and yet of late the East has stolen from us even the earthquake. California is, and is to be, blessed.

Heaps of Gold and Burdens of Interest.

Reports are that the vaults of the city savings banks and banks of deposit are heaped with gold as the country warehouses are heaped with grain. That the money lies there with no demand from competent borrowers, for real estate or for industrial investment. That the rate of interest to good city customers has dropped to 7 per annum, but with little demand. In fact, that the gold is heaped up doing no one any good, drawing no interest for those who own or control it. Thus reports say monetary affairs are in this city.

One has only to pass the city limits to find a different condition of affairs. Just across the bay and on valuable land, whence can be clearly seen the spires of the city's churches and the palaces of her nabobs, money is doled out by light-weight capitalists at 12. Go farther away from the city and the rate amounts to 18, and in some cases we doubt not to 24, to cramped borrowers. Earnest, industrious and responsible producers are thus compelled, oftentimes, to sacrifice half the profit of their labor to secure the balance. Thus affairs are generally in the country.

Return to the city. Drive a few piles in the treacherous ooze near the water front. Let a sewer pour its filth around them. Let the piles blossom out above with the gaudy coloring of the rum-shop. Put a tenant in it to draw his own death from the sewage in the cellar while he deals out death to others over his bar. Do this, and go to the bank for a loan and you can have it for 7—-for you have highly improved city property.

Go again to the country. Build a comfortable house on a gravelly rise of ground. Build your fences straight as an arrow's flight. Plant your orchards and vineyards and let them come to full bearing of luscious fruit and grape. Plow your field and let it be gilded with ripening cereals. Stock your dairy and let the air be resonant with the musical lowing of the herd. Let every work of thrift adorn your ranch and let every glance tell of honest and enterprising production. Then go to the city bank for a loan, and perhaps some manager will let you have it, as a personal favor, at 12; or some rural Shylock will oblige you—at 18; for you have improved country property.

Are not the pictures true to life? Is it a preacher's argument and therefore has no "business" in it? Well, thus it may be. Viewed then as a "business" investment the mass of sewage and rubbish, corraled with piles, is better than sunlit, fragrant fields. Why is it better? Is it surer of return? We have no space for argument. A few years ago a farmer, having cleared a snug sum from fertile fields, bethought himself to come to San Francisco, invest his money and live a round of leisure upon a rent roll. He bought a block of land, covered it with tenement houses and took his ease, transferring the plow-born callous from his palms to his knuckles, as he made his monthly knocks on tenant's doors. For a season he flourished, for the times were flush and his rents, like Iscr, rolled rapidly. Gradually the reduction came, until reduced rents were more than swallowed by taxes, insurance and repairs. Now he is poor, with an elephant and his family to feed, and glad indeed would he be to exchange his musty tenements for the old productive rural property.

This question of the putting of money where it will do most good is an old and not an easy one. We own we do not know any direct way to accomplish the result which is so desirable, namely, to place the lazy millions which lie in bank vaults in rural productive enterprises, where they would fill the State with life and feed and employ a million where there is now but a hundred thousand. The world is working at the solution of this problem, for in foreign countries there is the same need of cheap loans for agricultural producers. One thing seems, however, clear to us, and that is that a better and truer conception of the surety and promise of judicious loans on agricultural security, at low rates, must be instilled into the hypothetical heart of capital before much improvement in its behavior can be expected. This idea is growing in Europe, and the subject was discussed at a late international meeting of publicists at the Paris Exposition. M. Josseau, after dilating upon the importance of the question, remarked that while farmers could procure money at 4% in Russia, Hungary and England, and at 6% in Holland, this was out of the ques-

tion in France. He urged farmers to persist in the endeavors they had recently been making with the view of placing themselves on a like footing with tradesmen. M. J. Serstevens informed the assembly that the Central Agricultural Society of Belgium had this subject at present under consideration; the Superior Council of Agriculture had added their efforts to those of the society, in the hope of removing the difficulties which stood in the way of farmers procuring funds. But the enterprise had proved a failure, and he was against further essays in that direction. Count von der Straeten-Ponthoz could not adopt the views of M. J. Serstevens, and thought the condition of credit might be ameliorated to the advantage of farmers. Baron Lavalette cited the example of the Bank of Nevers, a branch of the Bank of France, which had rendered the greatest service to agriculture in the department of Nievre. The amount annually advanced to cultivators was about 15,000,000 francs (£600,000). M. Tachard reported a conversation which he had had with the German delegates, the substance of which was that in 1757 a number of proprietors associated themselves at the suggestion of Frederick the Great, and the results had been marvelous. Many societies of agricultural credit existed in Germany, and advanced loans at short dates. Herr Raffreiden, too, has founded in Westphalia numerous agricultural banks, which have rendered real service to farmers.

These distinguished gentlemen are right in the interest they take in the subject of putting agriculture on a par with trades in the enjoyment of the money lenders' favors. It is wrong that those cords of bright double-eagles should lie cold and useless because stock gambling and merchandising are at a low ebb. The only real activity now visible in our State is in the agricultural regions, and here indeed the hope of our future greatness lies. And yet capital looks askance at agricultural credit and pinches the head off every eagle which it doles out to the farmer. The goose has always been the reputed owner of the golden egg.

QUERIES AND REPLIES.

Passion Fruit from Peru.

EDITORS PRESS:—I send you with this one fruit and three leaves of the *Passiflora granadilla*. This is the first one ripe, although not the biggest, for some of the others not yet ripe are one-fourth larger. If the fruit is as good as I have eaten many times in Peru, it will prove an excellent fruit. For sick persons no better fruit can be found, as its pleasant pulp acts very pleasantly upon the stomach. The leaves, flowers and fruit of this species of the passion vine are all noticeably fine.—T. GRELCK, Los Angeles, Cal.

This is, indeed, a handsome passion fruit. The specimen received is seven and a half inches in circumference one way and eight inches the other. It is a more perfect oval than the *Passiflora edulis*, and is of a light orange color, covered with small spangles of a lighter shade. The outside shows longitudinal markings indicating the six-chambered structure within; but this division into six parts only extends to the inner case which surrounds the seeds, and to which they are attached. There are no walls to the chambers, but when ripe the seeds mass together and the whole pulpy mass may be lifted from the case on the point of a knife. The leaf is cordate and entire, and not three-lobed as in the *P. edulis*. The leaves we receive are 10 inches long and seven inches wide at the widest point. The specimens are the most striking we have ever seen of the *Passiflora*, but we have never had the opportunity of observation in the tropical regions where this numerous race of plants reaches its perfection. The plant which Mr. Grelck has so successfully introduced will doubtless win high favor both for its showy ornamentation and for the fruiting qualities which he extols. We find the pulp to be very fragrant and mild flavored, not having the marked acid of the *P. edulis*. We may remark that *granadilla* is not the proper specific name of this fruit, although we have passed it as such in this case. *Grenadilla* and *Passiflora* are synonyms. We hope to be able to fix upon the proper botanical name of the plant hereafter.

Black-Bearded Wheat.

EDITORS PRESS:—I mail herewith to your address four heads of wheat for name. The head somewhat resembles a club except that it is bearded, and the beards are black. A single

head of this singular variety was found in the field of Mr. William Woodward last year by his children. It was planted in his garden and the yield this year will be probably a quart. If you know anything about it you will oblige many subscribers here by mentioning its good qualities as well as bad. Some of our farmers pronounce it Wild Goose or Maccaroni wheat; others differ, while some say it is not wheat at all. If there is any good in it I want to give it garden culture this year and test it thoroughly.—CLAUDE V. BURKE, Yolo, Cal.

EDITORS PRESS:—The sample from Mr. Burke which you send me for identification is a sub-variety of the "Black-Bearded" wheat, one of the so-called "English" wheats (*Triticum turgidum*). It differs from the usual form in having the beard alone dark-tinted, the ear itself being of a grayish cast only; while ordinarily the chaff is dark and the awns white, or else both are dark-tinted. In form, however, it is exactly like the other. As to its distinctive qualities, the Black wheat is distinguished by coarse, strong straw, which, together with its rather sparse growth, secures it against lodging. Partly, doubtless, from the same causes, it rarely rusts, even in seasons when the White and Red wheats suffer badly. On the other hand, despite its large heads, its yield per acre is not greater than that of other wheats. The grain is not as easily cleaned and is thick-skinned hence does not yield as much of the higher qualities of flour. It is also said that in bread-making its flour requires greater care to produce sweet bread. It would, therefore, seem desirable chiefly in places where the other wheats are much subject to rust and lodging. As to its grain, that might possibly be so modified by the Californian climate as to render it unobjectionable for milling purposes.—E. W. HILGARD, College of Agriculture, Berkeley.

The wheat will not sell to advantage in this market except to the maccaroni makers, and the amount they use is comparatively small. The grain is better fitted for maccaroni than for flour.

Shrinkage of Apricots in Drying.

EDITORS PRESS: Will you give me information in regard to the shrinkage of apricots by drying? There are several here that know it all as regards drying, but they differ on this point. Some say four pounds will make one, and some put it as high as eight pounds, to make one of dried fruit. I think I have seen it advertised that fruit that will take seven pounds to make one dried in the sun, by using a drier five pounds will make one of dried fruit. Please give me all the information you can.—JOSEPH SEXTON, Goleta, Santa Barbara Co.

EDITORS PRESS:—In answer to your request to answer Mr. Sexton's questions, I would say that my experience has been with an Alden drier, and I find that the shrinkage depends upon the quality of the green fruit. Apricots that are in a very good condition, large and not over ripe, will require five and a half pounds to make one of dried; but if the fruit is small and too ripe, the shrinkage may run as high as eight pounds. Taking the fruit as it usually comes into the factory, I estimate the shrinkage at six and a half to seven pounds. This is the case with all other fruit as well as apricots.—C. T. SETTLE, San Jose, Cal.

Marketing Fowls.

EDITORS PRESS:—I see in your poultry quotations "broilers" \$2.50 to \$3.50 per dozen. What kind of fowls go in as "broilers?" And hens \$7 to \$8.50 per dozen. Do they go on the table, or is that the price for stock hens?—F. M. W., Bakersfield, Cal.

Our quotations represent the average quality of fowls as received in this market. "Broilers" are young fowls just feathered out and they bring \$2.50 to \$3.50; after that they go as "large broilers" and bring \$4 to \$4.50; one step higher come "young roosters" (without spurs) and sell at \$5 to \$7. Hens are full grown fowls; small ones bring \$7, and the range goes as high as \$11 for choice fat Brahmas. Large fowls must be well fattened to bring the extra prices. There are always some choice lots arriving which bring more than the average quotations. Market prices are made for fowls for the table chiefly if not wholly.

Barren Almond Trees.

EDITORS PRESS:—There are in this settlement a good many almond orchards, trees seven or eight years old, which have never borne worth speaking of. The trees are large and thrifty. Perhaps the difficulty can be explained by a thorough ventilation through the PRESS.—J. M. M., Orange, Cal.

Who can give us light on this phase of the almond? It is proving a most eccentric and uncertain tree in most situations in this State. Who has learned anything about it during the last year? Let such a reader give the RURAL his light.

ON FILE.—"Children's Rights," C. I. H. N.; "Apiary," H.; "Pruning," M. P. O.; "Not Lost," M. E. L.; "Sick Horses," W. H. B.; "Planting Orange Trees," S.; "Mortgage Tax Question," V.; "Growth of Alfalfa," J. H. S.; "Allie's Revenge," W. W.; "Insect Depredations," C. W. O.

Measuring Rainfall and Percolation.

A few months ago a reader of the PRESS wrote to us, proposing the use of a box of earth standing on a platform scale to determine the amount of rain which sank into the earth instead of the common rain gauge, which measures the whole amount precipitated. This he thought would give a better idea of the effective value of a rainfall, because it would measure only that which went into the earth and not that which flowed away over the surface. We pointed out the manifest errors which would unavoidably attend the use of such a rain meter, and mentioned the lysimeter, which has been in use both in this country and in England, for determining the amount and quality of the water which percolates through a certain depth of soil. We believe there are three of these lysimeters now in use in this country, the latest being constructed on a farm, which a public-spirited citizen of New York State, Mr. Lawson Valentine, has placed at the disposal of the editors of the *American Agriculturist*, in order that they may test experimentally all proposed crops and cultures which they deem worthy of experiment, and for conducting other investigations. One of the first steps taken to equip this experimental farm was the construction of a lysimeter. As this apparatus is of such great possible value in this State, where so much depends upon the effective rainfall or the depth of penetration into the soil, we requested Mr. Libby, the editor of the *Agriculturist*, to send us an engraving of the lysimeter which they had constructed and details of its construction, so that any of our readers who desire to supplement the testimony of their rain gauges with a measure of the water percolating through the surface soil, might construct the apparatus for themselves.

The small engraving on this page shows the lysimeter complete. The idea in it is to put an arrangement for catching the water around a certain body of the soil without disturbing its natural condition. Thus it is obvious that water will percolate through it just as it does through the other soil in the field; and heavy rains which, in part, flow off over the surface without entering the soil, may also flow over the lysimeter and not enter into the measure of effective rain. By this it is obvious that a truer idea of the value of a rainfall can be had than by the common gauge which records all that falls.

The *Agriculturist* describes its lysimeter as follows: A bottomless box, strongly made of two-inch plank, and about 45½ inches square inside, and averaging 36 inches deep, was forced into the soil until its top was even with the surface. Then a frame of five-inch timber was let down outside the box, so that its upper side was two inches below the bottom of the box. An excavation was then made so as to expose one end of the box as shown in the engraving. A plank bottom, six inches each way larger than the box and covered with galvanized iron, was then forced beneath the box upon the timber frame by means of jack-screws, and picking out the earth before it with a sharpened stick. Thus the wood work was in place and it remained to make a water-tight joint between the sides and bottom of the box. Before the box was pushed down into the soil it was lined with galvanized iron, and the lining was allowed to extend up around the lower edges so that the metal came outside the box below. This metal was pushed down upon the iron cover of the bottom and the two were soldered together all around. The bottom inclines one and a half inches from back to front, and an opening is left at the lower side from which the water which percolates through the enclosed soil runs into a measure placed below. Room is left in front of the apparatus by stoning up the cavity dug in the earth, and this gives space to attend to the working of the lysimeter as appears in the engraving.

From this it appears that the construction of an approved apparatus for measuring amount of percolation is not expensive nor difficult. We should like to know that there would be many built in this State by interested observers, on different soils, so that the amount of percolation could be reported in connection with the figures of the rain gauge.

THE Raucha El Sobrante has recently been surveyed. The land inside the survey is to be made public property, and an opportunity will be afforded settlers to gain a homestead in what is pronounced desirable, arable country. About 20,000 acres are to be thus sectionized.

The Prairie Dog and its Uninvited Guests.

The prairie dog (*Cynomys ludovicianus*) of Missouri region, and westward and southward, belongs to a genus of American rodents intermediate between the marmots and prairie squirrels. This woodchuck in miniature is about 13 inches long, with a tail four inches more; the color above is reddish or cinnamon brown, with lighter tips to the hairs, and a few black ones intermixed; beneath, brownish-white or yellow; tail like the back, with a black tip. The cheek pouches are very rudimentary, the eyes large and the ears very short. The prairie dog was probably so named from the sharp tone of its chattering, somewhat re-

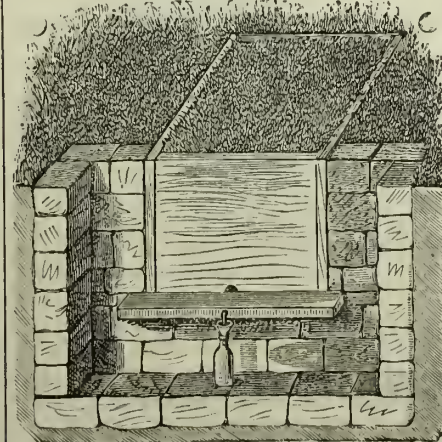
sembling the yelp of a small dog, as it bears no external resemblance whatever to the dog. It is the *petit chien* of the French Canadians, and the *wish-ton-wish* of the Western Indian. The engraving on this page, which we copy from the *Scientific American*, gives a view of the habitation of this curious animal, and the birds and reptiles which install themselves unasked in his habitation. As may be seen from the engraving, the prairie dogs live in burrows, and great numbers are found in the same locality, forming communities which the hunters



BURROW OF PRAIRIE DOG AND ITS INHABITANTS.

clumsy in their movements, and when, as rarely occurs, they are surprised at a distance from their burrows and find they cannot escape, they assume an air of audacity, and a most singular expression of defiance or of impotent anger, before allowing themselves to be captured.

They feed chiefly at night, their food consisting almost exclusively of grass and succulent stems. In the fertile lands of central Kansas, they sometimes prove terrible pests to the farmers in the sad havoc they make among the fields of growing corn. Squirrel-like, they are prudent enough to lay up a full supply of provender to last them through the long and rigorous winters they often have to endure.



THE LYSIMETER.

call "dog towns." These villages often extend over a distance of several miles.

Before the entrance to each burrow there is a little conical mound of earth, heaped up to a height of about 18 inches, and, on the top of this, one of the occupants may usually be seen sitting, intent on watching what is going on in

the community, or on the lookout for intruders. At the first alarm caused by an intruder, a general scampering takes place throughout the village, with cries of warning. Upon reaching their mounds they sit perfectly quiet, like so many sentinels, curious to know what all the commotion is about. At a further alarm they approach still closer to their entrances, ready to dive in, and appear to make vehement threats, throwing up their tails in a very comical manner with each energetic bark, accompanying this noisy chattering with a liquid gurgling sound. In a twinkling they disappear into their burrows in a ludicrous, tumbling manner, and then, after a short time, they may be seen here and there peeping out to see if the coast is clear. Like young pups, they are very

clumsy in their movements, and when, as rarely occurs, they are surprised at a distance from their burrows and find they cannot escape, they assume an air of audacity, and a most singular expression of defiance or of impotent anger, before allowing themselves to be captured.

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One of the most curious things in regard to the domestic economy of this little animal is that of its strange companionship with such undesirable guests as the burrowing owl and the rattlesnake, both of which are usually found inhabiting its abode. As to the owl, it is there like other parasites, perhaps, on sufferance merely, and very little notice is taken of its presence by the dog. Yet that the presence of the intruder is not always agreeable is proved by the fact that the dog often rids himself of the nuisance by removing his own quarters to a new burrow.

Agricultural Implements and Machines at the Mechanics' Fair.

The space allotted to agricultural implements and machines at this year's fair of the Mechanics' Institute is not so well filled as in former years. Whether the heavy drain upon the stock of the manufacturers and dealers has left them with nothing to show, or whether they have grown rich and eager for trade, it is for them, not for us, to explain. Although the exhibit is comparatively small, and though most of the articles shown are those with which fair-goers and farmers are familiar, the department shows some new things and many good ones, and more credit is due those who have come forward to show them.

Doubtless, the most original item in the department is the iron farm wagon, which may be found in the exhibit of the Sweepstakes Plow Company of San Leandro. The exhibiting orator, Mr. M. Baldwin, finds that this iron wagon is exciting much interest, and will be introduced in many parts of the State by those who have examined its merits at this exhibition. The wagon is the design of Mr. F. A. Hill, one of California's foremost inventors and mechanics. The running-gear is Mr. Hill's invention, and the wheel of the Duval patent. It has a two-inch axle and is lighter than a wooden wagon of the same capacity. It is built on the truss principle throughout, and this brings the weight of the load upon shoulders near the hubs, and not upon the central parts of the axle, as in wooden wagons. It has other points of strength and advantage which appear upon inspection, but which we have not space to describe at this time. It is a very interesting piece of mechanism and is being put to the test of actual work, as we are informed that one of the wagons is being run back and forth between this city and San Leandro, carrying five and one-half tons at a load. The advantage of iron as a material for farm wagons in its freedom from the influences of meteorological conditions is manifest. We hope the wagon will receive thorough trial for all purposes, that its points may be clearly shown.

Besides this wagon, the Sweepstakes Plow Company show a good assortment of the well known gang-plows and road-wagons. The exhibit is kept in fine order and is well shown.

In connection with the foregoing, Messrs. Baker & Hamilton show the Champion Mower, with diagrams explaining the novel mechanical movement which enters into its construction. This movement was first brought out at the time of the Centennial Exhibition, and has been thoroughly tested before being adopted by the manufacturers. It is a wonder of simplicity and should be thoroughly examined.

Mr. George A. Davis makes a good show of wheel-rakes, cultivators and plows of the Furst & Bradley manufacture. He has also the Eagle mower and Fish Brothers' wagons. These manufactures are all of standard excellence.

Two exhibits worthy of study are plows of San Jose design and manufacture. One is Fruhling's massive iron Pacific gang-plow, turning four furrows, and evidently an implement of power. Another plow from San Jose is M. Ross' "triple plow," especially adapted for ploughing orchards, vineyards, corn, cotton, sugar-cane, tobacco and the like. It is planned so as to be adjustable, and can be run close to the rows of vines, trees or plants, without injury to the same by the whistle-trees or the tread of the horses. These San Jose exhibits evidently do not enjoy the attention of an attendant, for they are covered with dust. They would show better if given a little care.

A good show is made of the use of iron tube or "gas-pipe" as a frame for harrows and wheelbarrows, by Calvin Nutting & Son of this city. Their adjustable tubular iron harrow has secured very favorable testimonials from some of our leading farmers. The frame is almost wholly of gas-pipe tubing, the teeth being inserted through it. The wings fold toward the centre, so that all of the teeth may be drawn from the ground when moving to and from the field. It has a seat for the driver, and his weight being added to the weight of the frame, it must take a good hold on the ground. There are also shown Scotch harrows, with frames also made of gas-pipe.

The well known Bachelder windmill, made in Napa, enjoys the distinction of being the only one on exhibition in this department. It is largely used and has an excellent reputation.

Marcus C. Hawley & Co. win the palm of the

Continued on page 140.

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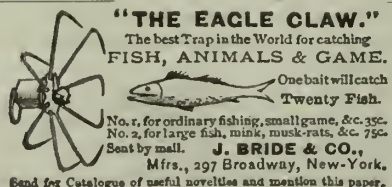
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COMMENCING

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And Closing September 21st, 1878.

50,000 CASH

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The exhibition will be divided into seven departments, and the

SOCIETY'S GOLD MEDAL

To be awarded to the most meritorious exhibition in each department.

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Ever offered by any Agricultural Society in the United States.

Attractive Military Tournament

THE PUBLIC SALE OF THOROUGH-BRED STOCK on Friday of the Fair.

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SINGLE ADMISSION.....50 Cents.

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Land for Sale in Napa County.

I am offering my lands in Foss Valley, ten miles north of Napa City, for sale, as follows—to wit:

One tract of 800 acres, including my homestead, 220 acres of which is choice valley land, the balance good grazing land, is well watered, has a large supply of wood, is well improved, has a comfortable dwelling of nine rooms, barn, granary, sheds, etc. Also, a good orchard and choice vegetable garden. Price, \$15.00 per acre.

Also, one tract of 1,020 acres, about 100 acres of which is valley, the balance good grazing hills, is well watered and has enough wood on it to pay for it. Price, \$5.00 per acre. Also, one tract of 300 acres, 40 acres tillable, a portion can be irrigated from springs, has a large amount of wood on it and 500 rods of stone fence. Is well suited to running a small dairy, and raising pigs and chickens, by which a good living can be made; price \$2,000. The climate is choice, being shut in from the chilly coast winds, but has just breeze enough to make it pleasant, title perfect. The above lands lay contiguous. I will sell the whole or portion one of the above tracts on easy terms—a liberal option can remain at 10 per cent. per annum. If desired, will sell with the land, 1,500 head of Spanish Merino sheep. Come and see me, as I am determined to sell. Address the undersigned at Napa City. WILLIAM CLARKE.

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One thousand six hundred acres of deeded land, in T. P. 19, N. R. 6 W., in Colusa County, situated near Stony Creek, on the county road, from Leesville to Elk Creek, comprising No. 1 farming land, and first-class grazing lands, all enclosed. Good house, seven rooms, well finished and painted. Two large barns, one wagon house, one wool house, large store house, wood house and other small buildings complete. Two good wells of pure cold water and a large spring of never-failing water running about one mile through the ranch. The house is surrounded with shade and ornamental trees. All the farming utensils and about 50 tons of hay will be thrown in if purchased soon. Any one wishing to engage in the dairy, or stock business of any kind, cannot find a better location in the State. Price, \$7.50 per acre, one half down and the balance to suit purchaser. For further particulars, apply to James W. Good, Colusa, or the undersigned.

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\$4,000.—Two Hundred Acres of Land in Mendocino County.

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Also, Six Hundred acres of grazing land, well fenced, three miles from the above farm, plenty of water and timber for all purposes. Price, \$2,250.

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One of the best ranges in the State. At present working 375 stands Italian Bees. Apply for particulars to

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GEORGE MCCrackEN, San Jose, Cal. Pure blooded Cotswold Sheep for sale.

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Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.

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Some 14,000 out of 26,000 acres of the grant remain for sale at comparatively low rates, in quantities to suit purchasers, on easy terms. Prices range from \$5 to \$30 per acre. The tract is between two and three miles wide, with the Northern Division of the C. P. R. R. passing centrally through its entire length. Send postage stamp for an illustrated paper containing information about Shasta County and these lands, to the proprietor of Reading Ranch.

Anderson, Shasta County, Cal.

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WANTED—A FARM.

To lease with option of purchase, from 100 to 200 acres of land, with water and timber suitable for general farming, with house of six rooms or more; near to a public school, and within 20 miles of San Francisco, having good communication by rail or water. Address, DAWSON, at this office.

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SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

E. W. WOOLSEY, Berkeley, Alameda County, Cal.

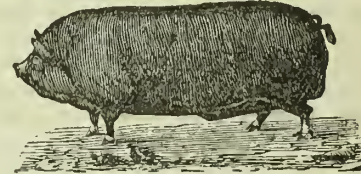
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Breeder and Importer of the "Crown Prince," "Sambo," and "Bob Leo" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.

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My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

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400 Thoroughbred and Graded

Spanish Merino Rams for Sale.

Bred from the first importation of Spanish Merino Sheep to California, in 1859

Prices to suit the times. Residence, one mile north of McConnell's Station, Western Pacific Division of C. P. R. R. P. O. address, MRS. E. McCONNELL-WILSON, Elk Grove, Sacramento Co., Cal.

THOROUGHbred SPANISH MERINO SHEEP!

200 Extra Rams

For sale. Yearlings and two-year-olds. In size, quality and condition unsurpassed. Also, 100 ewes at prices to suit the times. The nucleus of this flock was from a purchase made from Severance & Peet in 1873. My ranch is at Haywards, Alameda county, and may be reached by rail from San Francisco, seven times daily. Parties desiring choice sheep should see this flock before purchasing elsewhere.

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A party owning a herd of first-class thoroughbred Durham Short-Horn Cattle, who proposes winding up business, would be glad to correspond with parties desiring to buy such a herd, or would receive proposals for handling them on shares from parties having a good ranch, well located for sales of young stock, and who thoroughly understands the handling of such stock. Address with full particulars, Lock-Box 131, Oakland, Alameda Co., Cal.

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Calvert's Carbolic SHEEP WASH, \$2 Per Gallon.

After dipping the sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, August 28th, 1878.

The trade in Wheat and Barley shows a good deal of life. The shipments of Wheat for the month of August will exceed those of any previous month in our history. All advices from abroad are promising for future values and the trade consequently has considerable spirit. Shipments of Barley, by rail overland and by sea to various points, are going forward in good amounts. The threshing is still progressing under clear skies and avenues of transportation are full of moving grain.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday	10s	3d@10s	6d	10s	5d@10s	9d		
Friday	10s	2d@10s	6d	10s	5d@10s	9d		
Saturday	10s	2d@10s	6d	10s	5d@10s	9d		
Sunday	10s	2d@10s	6d	10s	5d@10s	9d		
Monday	10s	2d@10s	6d	10s	5d@10s	9d		
Tuesday	10s	2d@10s	6d	10s	5d@10s	9d		
Wednesday	10s	2d@10s	6d	10s	5d@10s	9d		

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1876	9s	3d@9s	6d	9s	5d@10s	—		
1877	12s	—@12s	4d	12s	3d@13s	—		
1878	10s	2d@10s	6d	10s	5d@10s	9d		

The Foreign Review.

LONDON, Aug. 27th.—The *Mark Lane Express*, in its weekly review of the British corn trade, says: The weather has been dull the past week. Rain fell every day. Much delay was consequently experienced in harvest operations. In the earlier district of home counties the land has been pretty well cleared of cereals, but in some fields the crops are still standing, while in the north a large proportion of Barley is still uncut. In the south of England the Barley crop appears to be to a great extent a failure. In the midland counties, where more favorable hopes were expressed, the prospects have changed decidedly for the worse. Scotch agricultural advices, on the whole, are favorable, both as regards Wheat and Barley; but as the weather has been broken and showery, some anxiety is felt. Beside the interruption to field labor, recent heavy rains have almost put a stop to threshing, and farmers have marketed very little Wheat at Mark Lane or provincial markets. Should wet weather prevail during the remainder of the harvest, it is more than likely a substantial enhancement of values will take place, especially now that the French crop is seriously deficient and the reported marvelous yield of Spring Wheat in America is more than doubtful.

Freights and Charters.

The *Call* reports a moderate demand for tonnage for Wheat, but at low rates, say 40s and 42s 6d to Liverpool and Cork. There are now in port 75,715 tons shipping engaged for Wheat, 63,648 disengaged and 12,580 tons loading general merchandise. On the way to this port, so far as known, 156,000 tons.

Eastern Grain Markets.

NEW YORK, Aug. 24th.—The export trade in Winter Wheat has been very heavy, nearly all for the Continent, and three-fourths for France, calling into requisition eight or ten large steamers and a score of sailing vessels. Spring Wheat has not begun to make its appearance in quantity and the English trade has been dull. France never before bought so largely of grain and provisions as she has this year, and as our imports thence are comparatively light, there is a possibility that the trade balance between the two countries may for the first time turn in our favor. Besides Wheat and Oats extensively, the Wheat market still remains in an abnormal condition. Spring Wheat is very scarce, and being concentrated in few hands is easily controlled. Holders ask extreme figures.

CHICAGO, Aug. 24th.—The Wheat market during the week has been fairly active, with a good speculative and large cash business. A notable feature is that Spring Wheat has for a portion of the time been higher than Winter. Sales of September were 83½@94½c. Corn has been unsettled, but closes weak and decidedly lower, September having sold from 33½c, the opening price, down to 37½c at the close. Oats were dull, weak and generally lower. Sales of September, 21½@22½c. Rye, 50c down to 43c for cash. Barley from \$1.16 down to \$1.03½ for September. Provisions have been very active and unsettled, and on some days speculation has run wild. Sales of September Pork, \$9.30 @10.07½. Lard, September, \$7.05@7.30.

Eastern Wool Markets.

BOSTON, August 24th.—The Wool market is quite dull for all kinds of clothing fleeces, but delaine and combing are still in request, and all available lots are taken at previous prices. At present manufacturers are well supplied, and the tendency of the market is in favor of buyers. Sales include Pennsylvania and Ohio fleeces, medium, No. 1, X, XX and above, at 36@38c; Michigan fleeces, 33@35c; Wisconsin

X and No. 1, 33@35c; low and No. 2 fleeces, 30@31c; combing and delaine, 37@45c; unwashed combing and delaine, 28@30c; Texas, 22@26½c; Colorado and Territory, 14@21c; Oregon, 25c; tub washed, 38c; scoured, 52½@65c; super and X pulled, 20@36½. California Wool is very quiet, the business for the week being the smallest for a long time, comprising only 117,000 lbs., at 19@26c for Spring and 16@25c for fall. Total sales of domestic for the week, 1,178,500 pounds.

NEW YORK, August 24th.—The volume of business in Wool, for the past week, has been of disappointing proportions—the few buyers present having employed their time in quest of medium clothing and combing and delaine selections. But, as the supply of these descriptions is rather small, they have in many instances been compelled to seek other markets. Fine Wools are in a measure neglected, though there are some buyers that will take them at their price. The extreme rate for X and XX Ohio is 36@37c, while good No. 1 will readily command outside prices. Business in Spring California has been light, owing chiefly to the presence of undesirable parcels. The goods market holds out no inducement for manufacturers to purchase largely, and they therefore proceed with the greatest of caution, refusing to anticipate their probable wants in the near future. It may be said here that no important decline is looked for in Wool, but, as is usually the case in the absence of free sales, and there are many who are compelled to realize, and to do this, are willing to shade the market a trifle. The London Colonial sales opened on the 20th inst. The following cable has been received: "The auction opened actively, last sales highest. Rates were fully maintained." Sales for the week include 20,000 lbs East India, at 16c; 3,000 lbs Spring California, 23½c; 4,000 lbs Fall do, 19c; 10 bags scoured do, 56c; 2,600 lbs Colorado, 14@16c; 12,000 lbs Spring Texas, 24c; 9,700 lbs Western do, 15@22½c; 80 bags scoured do, 45c; 75,000 lbs X and XX Ohio, 36@37c; 70 bags super pulled, 34@35c; 8,000 lbs fine Wisconsin, 35½c; 5,000 lbs do Western, 35c; 15,000 lbs do unwashed do, 24c; 10,000 lbs medium unwashed do, 37c; 20,000 lbs combing, 40@47½c; 20,000 lbs low unwashed and coarse, do, 38@41c.

PHILADELPHIA, August 27th.—The Wool market is quiet, with a moderate business doing. California is quoted at 20@30c for fine and medium, and 18@25c for coarse.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Aug. 7.	WEEK. Aug. 14.	WEEK. Aug. 21.	WEEK. Aug. 28.
Flour, quarter sacks..	37,623	33,746	64,333	49,131
Wheat, centals.....	322,937	388,612	300,17	393,016
Barley, centals.....	36,303	30,963	62,395	44,631
Beans, sacks.....	181	130	350	437
Corn, centals.....	188	539	556	2,094
Oats, centals.....	3,551	11,902	7,121	3,462
Potatoes, sacks.....	7,203	8,375	12,838	8,859
Onions, sacks.....	554	1,123	877	991
Wool, bales.....	1,475	2,755	2,519	1,156
Hops, bales.....				45
Hay, hales.....	2,406	2,579	2,389	2,835

BAGS—Trade is running along at ring prices, without notable occurrences.

BARLEY—The demand is sharp, both for local trade and export, and feed quotations are a little higher than last week. We quote 1,100 sks old Brewing, at \$1.37½; 150 good Coast Feed, at \$1.07½; 130, 200, 650 and 400 fair Coast and 400 dark Bay, at \$1.05, and 327 dark Coast, at \$1.07 cttl, and 3,000 cttls, for Peru, choice Feed at \$1.12½; 150 and 550 sks brewing, at \$1.15; 140 do Bay Feed, at \$1.10, and 200 do Coast Feed, at \$1.06½, and a car of Chevalier, at \$1.85 cttl.

BEANS—New Beans of different kinds are now coming in. Sixty bags new Pink sold at \$4.25.

BUCKWHEAT—A sale of 80 sks new Buckwheat has been made during the week at \$1.52½ per cttl.

CORN—Prices have shaded down a little. The supply of Eastern Corn answers the present demand. We note sales: 200 cttls Eastern Yellow sold at \$1.90 delivered at Oakland, and 200 here at \$1.80; White quoted at \$2.40. No new California has yet come in.

DAIRY PRODUCE—A farther advance of 2½c flb has been gained on choice fresh Roll. The supply is good. Cheese is unchanged.

EGGS—Eggs have scored an advance of 2½c per doz for fresh California.

FEED—Although hay receipts are considerable, choice Wheat Hay is still scarce, and quotable at \$14 per ton for the best. Middlings have advanced to \$24 per ton and Bran has this week but one price, \$16. We note sales of lower grades of Hay as follows: Fifty tons good Cow, \$9; 30 tons good Stock, \$9; 43 tons do, \$8.75; 41 tons common Stock, \$7 per ton.

FRESH MEAT—Beef is lower and very abundant. The quality is generally good. Mutton is unchanged, with ample supply. Pork is lower from large receipts, which are increasing.

FRUIT—Choice Peaches and Grapes have done a little better this week. Pears, Figs, Apples and Prunes have been more freely received and sold lower. Special prices may be found in our table below.

HOPS—A few Hops are still sold to local consumers, but there is nothing new here yet. Emmet Wells says of the New York market for the week ending August 16th: "There is no

change in our market since our last issue. The shipping demand has entirely ceased, and only a small trade is doing with brewers. The attention of the trade is now turned toward the new crop, of which a bale arrived here on Wednesday of this week, and will compare favorably with the early Hops of former years. The first pocket of English Hops on the London market brought 48 8s (or about 35 cents our money)."

OATS—Prices are unchanged and sales small. One hundred and fifty sacks good California sold at \$1.50, and small lots of common at \$1.30 per cttl.

ONIONS—Prices are unchanged from last week. Receipts are small and easily disposed of. POTATOES—The only change is a slight cheapening in Sweets.

PROVISIONS—Provisions are unchanged in price. The demand is strong and increasing. Arrivals of Eastern Hams have almost stopped, as present prices are relatively lower here than at Eastern packing points.

TALLOW—Tallow is a little weaker, but is selling freely at quotations.

VEGETABLES—Our list shows several marked changes in prices.

WHEAT—An advance is made in quotations for Shipping. Eight hundred tons good Shipping sold this morning at \$1.77½ per cttl. Other sales during the week have been as follows: 8,000 cttls choice Shipping, 1,76½; 300 do, \$1.75; 2,600 and 1,000 good Shipping, \$1.73½; 4,000 do, \$1.72½@1.73½; 200 sks fair Milling, \$1.72½; 400 cttls fair Shipping, \$1.70; 1,200 and 400 cttls do, \$1.67½; 2,000 do, slightly shrunken, \$1.62½; 2,000 do, \$1.60; 25,000 cttls, viz: 4,500 cttls strictly choice Milling, \$1.77½; 550 fair Shipping, \$1.73½; 5,800 good Shipping, \$1.72½; 10,000 and 4,000 choice Shipping, \$1.75 per cttl.

WOOL—Small lots of fall clip are now arriving, but prices are not yet established. We note sales of 50,000 Spring at 17@25c.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY, M., August 28, 1878.

BEANS & PEAS.

Bayo, cttl..... 5 75 @ 60
Butter..... 4 50 @ 60
Pea..... 4 25 @ 50
Red..... — @ —
Pink..... 4 00 @ 25
Sut White..... 4 25 @ 50
Lima..... 4 00 @ 50
Field Peas..... 1 10 @ —

BROOM CORN.

Old..... 3 4 @ 7
New..... 4 4 @ 8
California..... 4 @ 4½
German..... 6 4 @ 7
Oregon..... 6 4 @ 7

BUTTER.

Cal. Fresh Roll, lb. 27½ @ 35
Fancy Brands..... — @ 35
Pickle Roll, new..... 25 @ 27½
Firm, old..... 12 @ 16
Western Reserve..... 12½ @ 14
New York..... — @ —

CHEESE.

Cheese, Cal. lb. 8 @ 12½
German..... 10 @ 12
N. Y. State..... — @ —
Girly Factory..... 11 @ 13

EGGS.

Cal. fresh, doz..... 37½ @ 40
Ducks..... 27½ @ 28
Oregon..... 15 @ 22
do Pickled..... — @ —

FEED.

Bran, ton..... — @ 16
Corn Meal..... 42 @ 40
Hay..... 7 @ 14
Middlings..... 24 @ 00
Oat Cake Meal..... 30 @ 00
Straw, hals..... 25 @ 60

FLOUR.

Extra, hbl..... 25 @ 65
Superfine..... 4 25 @ 50
Graham, lb..... 3 @ 3½

FRESH MEAT.

Beef, 1st quality, lb 5 @ 6
Second..... 4 @ 5
Third..... 3 @ 4
Mutton..... 4 @ 5
Spring Lamb..... 6 @ 7
Pork, undressed..... 4½ @ 4
Dressed..... 6½ @ 7
Veal..... 6 @ 8
Milk Calves..... 8 @ 9
do choice..... 10 @ 10

GRAN. ETC.

Barley, feed, cttl. 1 @ 12½
Brewing..... 1 @ 15
Chevalier..... 1 @ 15
Buckwheat..... 1 @ 15
Corn, White..... 2 @ 25
Yellow..... 1 @ 20
Small Round..... 2 @ 20
Milling..... 1 @ 17
Wheat, Shipping..... 1 @ 17
Milling..... 1 @ 17
Off Grades..... 1 @ 14

HIDES.

Hides, dry..... 15 @ 16
Wet salted..... 7 @ 9

HONEY, ETC.

Beeswax, lb..... 30 @ 31
Honey in comb..... 11½ @ —
do No. 2..... 8 @ 9
Dark..... 8 @ 9
Strained..... 5 @ 6

HOPS.

Oregon..... 3 @ 5
California..... 4 @ 7
Wash. Ter..... 4 @ 6

LIME, ETC.

Walnuts, Cal..... 8 @ 9
do Chile..... 7 @ 8
Almonds, db shl lb 7 @ 8
Soft shbl..... 14 @ 16
Brazil..... 14 @ 16
Pecans..... 13 @ 14

NITS—Jobbing.

Flour, ex. fam, hbl 0 @ 60
Corn Meal, lb..... 2½ @ 3
Sugar, wb. crshd 12½ @ 13½
Light Brown..... 8 @ 9
Coffee, Green..... 23 @ 35
Tea, Fine Black..... 50 @ 60
Finest Japan..... 55 @ 60
Candied, Adm'te..... 15 @ 25
Soap, Cal..... 7 @ 10

RICE.

Rice..... 8 @ 12
Yeast Pwd. doz. 1 50 @ 20
Can'd Oysters doz 0 @ 50
Syrup, S F Gold'n 75 @ 102
Dried Apples, lb. 10 @ 14
Ger. Prunes..... 12½ @ 15
Figs, Cal..... 9 @ 10
Peaches..... 11 @ 10
Oils, Kerosene..... 50 @ 60
Wines, Old Port..... 3 50 @ 60
French Claret..... 1 00 @ 50
Cal. doz bot..... 3 00 @ 50
Whisky, O K, gal. 3 50 @ 60
French Brandy..... 4 00 @ 60

TALLOW.

Crude, lb..... 7 @ 7½
Refined..... 7 @ 7½

WOOL, ETC.

S. Joa'n, 12mo free 17 @ 19
do 6 & 7 mo do 15 @ 18
Burry, 12mo..... 13 @ 16
do 6 mo..... 14 @ 15
Scabby..... 12½ @ 15
Southern Coast, free 16 @ 19
do do burry 14 @ 16
Northern, free..... 22 @ 24
do, seedy & burry 18 @ 20
Nevada..... 18 @ 22
Oregon Valley..... 17 @ 20
do, Eastern..... 22 @ 24

RETAIL GROCERIES, ETC.

WEDNESDAY, M., August 28, 1878.

Butter, California 25 @ 35
Cholce, lb..... 25 @ 35
Cheese..... 18 @ 25
Eastern..... 25 @ 30
Lima, Cal..... 18 @ 25
Eastern..... 20 @ 25
Flour, ex. fam, hbl 0 @ 60
Corn Meal, lb..... 2½ @ 3
Sugar, wb. crshd 12½ @ 13½
Light Brown..... 8 @ 9
Coffee, Green..... 23 @ 35
Tea, Fine Black..... 50 @ 60
Finest Japan..... 55 @ 60
Candied, Adm'te..... 15 @ 25
Soap, Cal..... 7 @ 10

FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., August 28, 1878.

FRUIT MARKET.

Apples, box..... 50 @ 37½
do Cooking..... 25 @ 30
Bananas, buch, 3 00 @ 4 00
Blackberries, ch't 1 50 @ 3 50
Cocoanuts, 100.. 4 00 @ 5 00
Figs, lb..... 3 @ 4
Grapes, com, bx..... 25 @ 40
Grapes, Must'do 75 @ 1 00
Limes, Mex..... 7 00 @ 8 00
do, Cal, per M..... — @ —
Lemons, Cal M..... — @ —
Sicily, box..... — @ 12 00
Mangoes, 100.. 4 00 @ —
Oranges, Mex..... — @ —
M..... — @ 20 00
Tahiti..... 15 00 @ 20 00
Cal..... — @ 20 00
Peaches, hsk..... 50 @ 1 50
Pears, hsk..... 25 @ 40
do, Bartlett..... 85 @ 1 00
Pineapples, doz. 5 00 @ 6 00
Plums, lb..... 1 @ 3
Prunes, lb..... 2 @ 4
Raspberries, lb..... — @ —
Strawberries, ch't 2 50 @ 5 00

DRIED FRUIT.

Apples, lb..... 5½ @ 7½
do new..... 9 @ —
Apricots..... 15 @ —
Citron..... 23 @ 24½
Dates..... 9 @ 10
Figs Black..... 4 @ 7
White..... 6 @ 8

GENERAL MERCHANDISE.

[WHOLESALE.]

WEDNESDAY M., August 28, 1878.

BAGS—Jobbing.

Eng Standard Wheat, 12½ @ 13
Cal. Manufacture..... — @ —
Hand Sewed, 23x36. 13 @ —
24x36..... 14 @ —
23x40..... 14½ @ —
Machine Swd, 23x36. 12½ @ —
Flour Sacks, balves..... 10½ @ 11
Quarters..... 6 @ 7
Eighths..... 4½ @ 4½
Hessian, 60 inch..... 15 @ —
45 inch..... — @ 11½
40 inch..... 10½ @ —
Wool Sacks..... — @ —
Hand Sewed, 3½ lb. 47½ @ 50
4 lb do..... 52½ @ —
Machine Sewed..... 50 @ —
Standard Gunicks..... 14 @ 15
Bean Bags..... 7 @ 8

CANDLES.

Crystal Wax..... 17 @ —
Eagle..... 12 @ —
Patent Sperm..... 30 @ —

CANNED GOODS.

Assorted Pie Fruits..... — @ —
2½ lb cans..... 2 25 @ 2 50
Table do..... 3 00 @ 3 25
Jams and Jellies..... 3 50 @ 3 75
Pickles, hf gal..... 3 25 @ —
Sardines, qr box..... 1 67½ @ 2 00
Hf Boxes..... 2 50 @ 2 75

POTATOES.

Petaluma, cttl..... 1 00 @ 1 25
Humboldt..... — @ —
Cuffy Cove..... — @ —
Early Rose..... 1 10 @ 1 30
Half Moon Bay..... 1 00 @ 1 25
Kidney..... — @ —
Sweet..... 1 50 @ 1 75

POULTRY & GAME.

Hens, doz..... 7 00 @ 8 50
Roosters..... 5 00 @ 6 50
Broilers..... 3 50 @ 4 50
Ducks, tame..... 5 00 @ 6 00
do Mallard..... — @ —
Geese, pair..... 1 50 @ 2 00
Wild Gray, doz..... — @ —
White do..... — @ —
Turkeys..... 20 @ 23
do, Dressed..... — @ —
Snipe, Eng..... 3 00 @ 4 00
do, Common..... 1 00 @ 1 25
Rabbits..... 1 50 @ 2 00
Hares..... 3 00 @ 4 00
Venison, lb..... 8 @ 12½

PROVISIONS.

Cal. Bacon, Hvy, lb 11½ @ 12½
Medium..... 12 @ 12½
Light..... 13 @ 13½
Lard..... 11 @ 13
Salted Beef..... 11 @ 13
do Eastern..... — @ —
Shoulders, Cover'd 7½ @ 8½
Hams, Cal..... 12½ @ 13½
Ducpe's..... 15 @ 16
Boyd's..... 14 @ 15
Davis Bros..... — @ —
None Such..... 15½ @ 16
Ames..... 16 @ 17
Whittaker..... — @ —

SEEDS.

Alfalfa..... 5 @ 12
Cauary..... 6 @ 8
Clover, Red..... 15 @ 16
do White..... 50 @ 55
Cotton..... 6 @ 10
Flaxseed..... 3½ @ —
Hemp..... 6 @ —
Italian Ry Grass 35 @ —
Perennial..... 35 @ —
Millet..... 10 @ 12
Mustard, White..... 2½ @ 3
Brown..... 1½ @ 2
Rape..... 3 @ 4
Kye Blue Grass..... 20 @ —
2d quality..... 18 @ —
Sweet Grass..... 1 00 @ 30
Orchard..... 16 @ 19
Red Top..... 18 @ 20
Hungarian..... 8 @ 10
Lawn..... 50 @ —
Mesquit..... — @ 25
Timothy..... 9 @ —

TALLOW.

Crude, lb..... 7 @ 7½
Refined..... 7 @ 7½

WOOL, ETC.

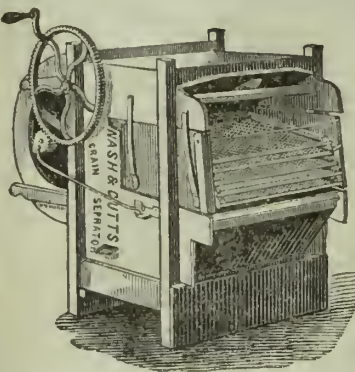
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do, seedy & burry 18 @ 20
Nevada..... 18 @ 22
Oregon Valley..... 17 @ 20
do, Eastern..... 22 @ 24

LIME, ETC.

Agricultural Articles.

THE BEST IS THE CHEAPEST.

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GRAIN SEPARATOR AND FAN MILL.

THREE SIZES—Warranted to Clean from 60 to 200 bushels per hour, perfectly.

PRICES No. 1, \$35; No. 2, \$45; No. 3, \$62.

The Nash & Cutts' Machine is the only machine that has taken the First Premium at California State Fairs in 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877.

Nash & Cutts' Machine will thoroughly separate Mustard Seed, Cheat, Barley, Oats, Cracked Wheat, etc., from Wheat in a rapid and satisfactory manner.

No zinc sieves used in the Nash & Cutts' Grain Separator and Fan Mill; therefore we can Clean Faster, Better, and with Less Work and Trouble.

Than any other machine now in use.

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EVERY MACHINE FULLY WARRANTED.

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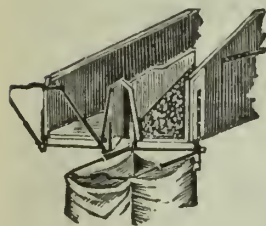
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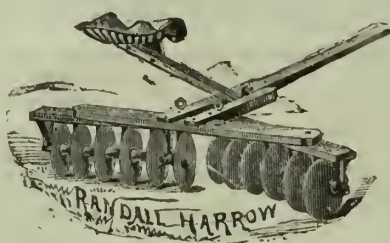
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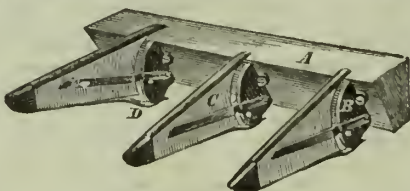
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Adjustable Grain Lifter for Headers.



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MATTESON & WILLIAMSON'S

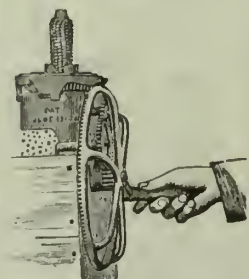


Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over eradic knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

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CALIFORNIA GOLD MEDAL

AND THE

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BEST FRUIT DRIER,

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Nurserymen.

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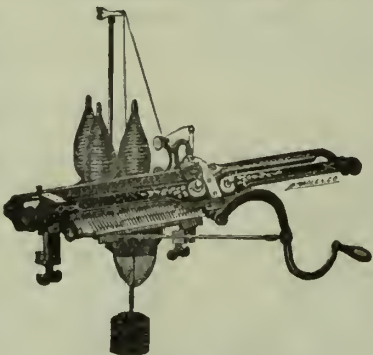
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That knits flat or tubular work of all sizes; Narrows and widens on hosiery or tubular work; Knits a regular right-angled heel, as by hand; Narrows off the toe; Knits a sock or stocking complete; Forms genuine Ribbed or Seamed work; Knits the Double, Flat, or Fancy webs; Knits an elastic seamed-stitch Suspender with button-holes; Knits the Afghan stitch, Cardigan Jacket stitch, Fancy Ribbed stitch; the Raised Plaid stitch, the Nubia stitch, Shell stitch, Unique stitch, Tidy stitch, etc. It is now the standard machine for manufacturing, and the only family knitter that fills the bill. Local agents wanted. Send for circulars to

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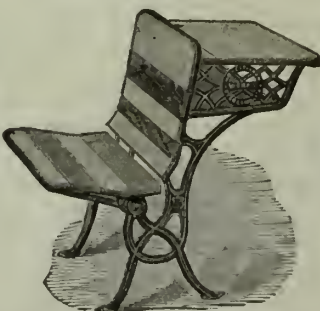
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SEEDS.

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Crosby's Extra Early Marblehead Mammoth } Sweet Corn.
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Early Canada } Yellow Flint Corn.
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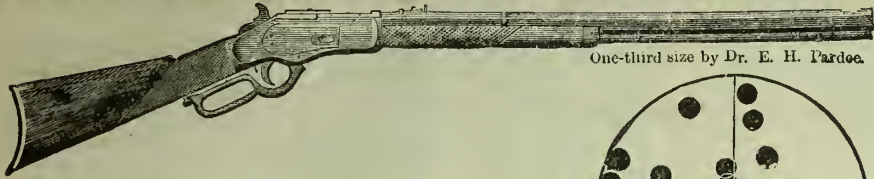
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The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round-barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder,

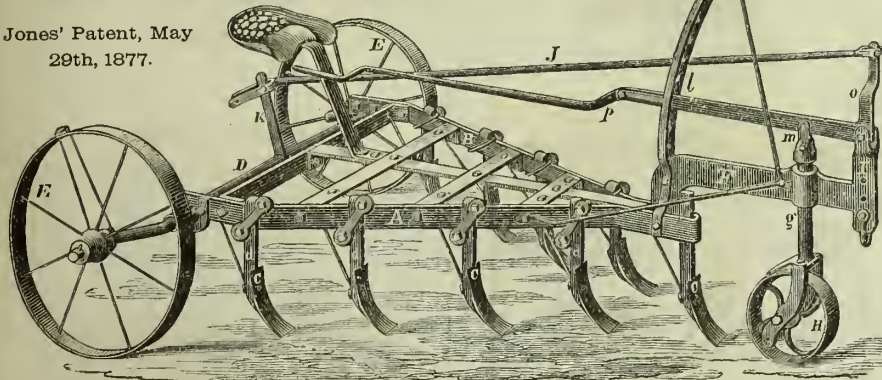
JOHN SKINKER, No. 115 Pine Street, San Francisco

SOLE AGENT FOR THE PACIFIC COAST.

HOLLY & MACOON'S CULTIVATOR.

Manufactured by Holly & Magoon, Stony Point, Sonoma Co., and Holly & Jones, Lakeville, Sonoma County.

Jones' Patent, May 29th, 1877.

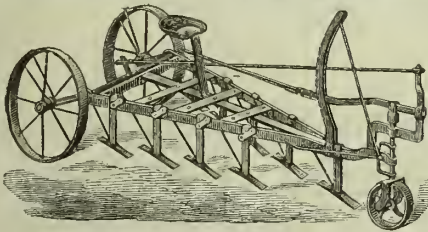


This Cultivator is made by practical men, after years of experience, and better meets the wants of California farmers than anything before offered.

Made of the best material (with wood or iron frame), and warranted in every respect.

Prices REASONABLE.

For further information address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Francisco and Sacramento, Cal.



Our new DOUBLE-BOX WHEEL

Is a decided improvement, to which we wish to call the especial attention of those who would secure the best and most durable.

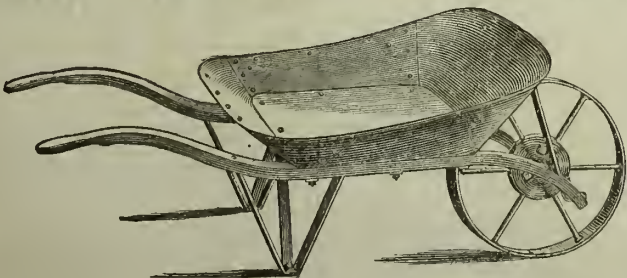
Our STRAIGHT CHISEL CULTIVATORS (patent applied for) are self-sharpening and made of the best cast steel, with an improved method of fastening to the standard, approaching perfection itself.

FRANCIS SMITH & CO.,

MANUFACTURERS OF

THE PATENT CHANNEL IRON WHEELBARROWS,

SHEET IRON PIPE.



SHEET IRON PIPE.

The Strongest Barrow Made. These Barrows are made by Superior Workmen, and of the best material. All sizes kept constantly on hand.

Lap-Welded Pipe, all Sizes, from Three to Six Inches. Artesian Well Pipe. Also, Galvanized Iron Boilers, from Twenty-five to One Hundred Gallons.

Iron Cut, Punched, and Formed for making pipe on ground, where required. All kinds of tools supplied for making pipe. Estimates given when required. Are prepared for coating all size of pipes with a composition of Coal Tar and Asphaltum.

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25 FASHIONABLE VISITING CARDS—no two alike, with name, 10c. Nassau Card Co., Nassau, N. Y. YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

GRANGERS' BUSINESS ASSOCIATION.

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Capital Stock, \$1,000,000.

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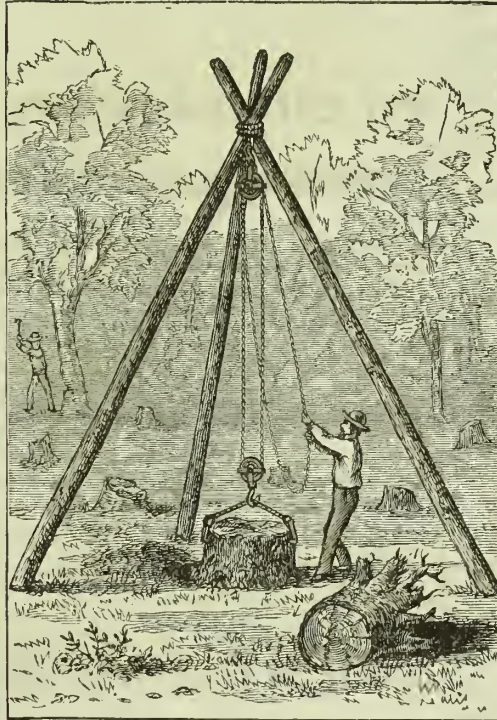
We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

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WESTON'S

DIFFERENTIAL PULLEY BLOCKS.



One Man Can Easily Lift 1,000 Pounds.

Load Always Suspended; it can never "Run Down"

Lowering Effected by Pulling the Slack Chain.

One Man With This Tackle is Better than Four or Five with the Ordinary Double Block.

AS APPLIED

TO STUMP PULLING.

The general utility of this Pulley and the many different ways in which it can be applied, render it especially serviceable for agricultural purposes

It can be used successfully as a Stump Puller and Remover of Heavy Stones. To Farmers and Woodmen this Pulley is invaluable, as it economizes both time and labor. In half the time it enables one man to accomplish work which formerly taxed several to perform. For sale by

DUNHAM, CARRIGAN & CO., Agents.

Blunt's Universal

Surface and Deep-Well Pumps. Send for Circulars.

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SAN FRANCISCO.

In consequence of spurious imitations of

LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

Lea & Perrins

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

H. H. H.

HORSE MEDICINE,

D. D. T.—1868.

As a horse medicine it is superior to any liniment ever invented. For RINGBONE, SPRAIN, SWEENEY, CALLOUS LUMPS, and all old sores, apply freely so as to blister, from three to five days in succession, and in four or five days, if not cured, repeat as at first. SPRAINS, STIFF JOINTS, BUISES, WINDGALLS, and all slight ailments, apply a small quantity so as not to blister. Saddle Sores, Cuts, and all other sores where the skin is broken, mix the liniment half and half with any kind of oil, and apply in moderation.

WILLIAMS & MOORE, Proprietors, STOCKTON, CAL.

TO LUMBERMEN.

The Property of the Duncan's Mills Land and Lumber Company,

Sixty miles from San Francisco, at the terminus of the North Pacific Coast Railroad, Sonoma County, is offered for sale on very favorable terms.

There are 3,500 acres of Redwood Timber land, new steam Saw-mill, general store, dwellings, logging railroad, water works, etc.

Satisfactory reasons for selling will be given to prospective purchasers.

Also, if desired in connection with the above, a lumber yard on the Bay of San Francisco, having superior facilities for shipping by rail or by water, and having a large and constantly increasing business

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Mining and Scientific Press Patent Agency.

Our U. S. and Foreign Patent Agency presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system and intimate acquaintance with the subjects of inventions in our new community. All worthy inventions patented through our Agency will have the benefit of a description or an illustration and explanation in the MINING AND SCIENTIFIC PRESS or the PACIFIC RURAL PRESS. We transact every branch of Patent business, and obtain Patents in all civilized countries. The large majority of U. S. and Foreign Patents granted to inventors on the Pacific Coast have been obtained through our Agency. The files of cases and official records in our office, our patent law and scientific library (already the largest west of the Mississippi), are constantly increasing. These facilities, with the accumulation of information of special importance to our home inventors, by the experience of its proprietors in an extensive and long continued personal practice, gives them combined advantages greater than any other agents can possibly offer to Pacific Coast inventors. We can give the best and most reliable advice as to the patentability of new inventions. Advice and Circulars Free. Our prices are as low as any first-class agencies in the Eastern States.

DEWEY & CO.,

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No. 202 Sansome St., S. F.

OUR AGENTS.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. L. THARP—San Francisco.
B. W. CROWELL—California.
A. C. KNOX—Pacific Coast.
C. N. WEST—Santa Cruz, Monterey and San Benito counties.
A. C. CHAMPION—Tulare, Fresno and Inyo counties.
W. D. WHITE—San Bernardino county.
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G. W. MCGREW—Santa Clara county.
RICHARD ALLEN—British Columbia.
R. D. NUNNALLY—Siskiyou County, Cal.
DR. W. G. ALBAN—State of Nevada.

HUNSAKER, TULARE CO., CAL., Jan. 15, 1878.

You will now receive my grateful, heartfelt thanks for the able manner in which you have conducted the interest entrusted to you by me. Your acknowledged ability, confirmed to me as it is by the successful presentation of my claim for a patent on a pump power, not only delights me, but suggests the propriety of my continued patronage and that of all my friends. With kind wishes for your future success, I subscribe myself, yours respectfully,

Messrs. DEWEY & Co., Patent Solicitors, S. F.

Thanks for Prompt Attention.

Stockton, June 26th, 1878.

Messrs. DEWEY & Co., S. F.:

I have received the patent for my invention in wagon brakes, which you prosecuted for me; patented May 11th, 1875—No. 163,946. Thanks to you for your prompt attention to the case; you will hereafter be my attorneys in such cases. I recommend all inventors on the Pacific coast to give you a call, which I think they will never have any cause to regret. Very truly yours,

GEO. G. BUCKLAND.

Day's Improved \$60 Automatic Incubator.

Simplest and best. Hatches and rears the chicks. Best possible endorsements. Address for circular, etc., DAY BROS. & CO., 92 Linden Avenue, Baltimore, Md.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

California Furniture Manufacturing Co.,

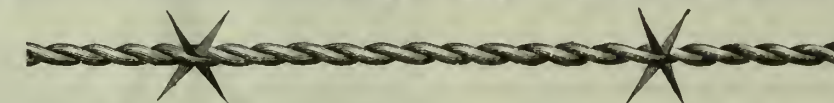
224 & 226 BUSH STREET, SAN FRANCISCO, CAL.

Manufacturers, Importers, Wholesale and Retail Dealers in

FURNITURE, Etc.

LATEST STYLES AND LOWEST PRICES.

TO OUR PATRONS AND THE PUBLIC.



Having obtained the control of the SCUTT PATENT MACHINERY on the Pacific Coast, we hereby leave to inform you that we are manufacturing the

Scutt Patent Four-Pointed Steel Barbed Fence Wire,
And we claim its superiority for the following reasons, viz: It is plaited, thereby preserving the grain of the metal. Our machines do not twist the single strand. We use steel made by the Seaman & Martin process for barbs. Our wire is made entirely by machinery, and is perfectly uniform. It is plaited by patent process, and is weather-proof. There are no knife points. It is four-pointed, having 128 points to the rod, double the number of any two-pointed wire. Our wire is wound upon strong spools, and can be shipped any distance.

To those needing fencing, and being obliged to transport it long distances by rail and wagon road, we would especially call attention to the difference in cost between barbed wire and lumber, as well as in cost of material. It takes 300 pounds single strand for one mile, and less than one-half as many posts as board fences. Please address orders to

GRANGERS' UNION, Manufacturers,
280 and 282 Main Street, STOCKTON, Cal.

A Book for all That Have a Garden.

FRAGARICULTURE;

—OR THE—

Culture of the Strawberry.

A PRACTICAL TREATISE ON

Culture, Propagation, Management
and Marketing of the Strawberries.
1878.

Illustrated with Photographs, representing
the average size of best varieties.
Especially adapted to the
Family Garden.

BY FELIX GILLET,

Nevada City, Cal.

TABLE OF CONTENTS.

Fragariculture; Description; Varieties; Selection; The Soil; Preparation of the Soil; Manures; Time of Setting Strawberries; Setting out Strawberries; Culture in Rows and Hills; Matted Row System; Mulching; Irrigation; Care of Plants after Setting; Propagation; Propagation by Seed; Resetting; Exposure; Annual Varieties; Biennial Varieties; Ever-bearing, or Wood Varieties; Bush-alpine Varieties; Staminate and Pistillate Plants; Hybridization; Forcing Strawberries; Care to Plants Forwarded by Mail; Duration of Strawberry Beds; Mode to Perpetuate Strawberry Beds; How to make Strawberries Last; Spring Work on Strawberry Beds; How to Raise Very Large Fruit; How to Pick and Keep Strawberries; Packing and Shipping; Insects Injurious to Strawberries; Maladies of the Strawberry; The Art of Preparing Strawberries; Preserving Strawberries; Medicinal Properties of Strawberries; General Hints on Fragariculture; Explanation of Photographs, and list of best varieties.

PRICE—50 CENTS A COPY.

Each photograph represents a group of strawberries—three to five—and not a single one, and is six inches by four inches.
NOTE.—It is the most complete, practical, interesting treatise on Strawberry Culture ever published in the United States. Address

DEWEY & CO., Publishers,

202 Sansome Street, S. F.

P. S.—Also, for sale by A. Waldteufel, in San Jose.

BERKSHIRE and POLAND CHINA PURE BLOODS.

The undersigned have a supply of young pure bloods of Berkshire and Poland China breeds of Pigs, and one Poland China Boar 19 months old, for sale. We will be ready to furnish to order at any time in the future. Pedigree furnished. We are making a specialty of these breeds for market.
GREVES & WHITE,
Riverside, San Bernardino Co., Cal.

This paper is printed with Ink furnished by
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St., Philadelphia & 59 Gold St., N. Y.

Vertical Feed Victorious.

A PERFECT

Sewing Machine!

The result of an immense outlay of money and years of labor and experiments by the best mechanics to be found. Composed of but twelve working parts (others require from thirty to forty parts), each part of direct action, reducing friction to a minimum. SIMPLICITY, STRENGTH, DURABILITY, EASE OF OPERATION, GREAT RAPIDITY OF WORK COMBINED, constituting the only PERFECT, COMPLETE and FAULTLESS SEWING MACHINE on the face of the earth. The New

"DAVIS VERTICAL FEED"

Lock-Stitch Sewing Machine.

Lightest running Shuttle Machine in the world.

SO CONFIDENT ARE WE THAT THE

VERTICAL FEED

(Which is as far in advance of the old feed used on all other machines as steam is ahead of horse-power, and is the exclusive property of this company), is the

ONLY POSITIVE SUCCESS

In all Departments of Sewing, that we make the following offer:

ONE THOUSAND DOLLARS

Will be given to any person (sewing machine experts included) who will, with any other sewing machine, follow the "DAVIS VERTICAL FEED" through its vast range of practical work.

All lovers of progressive science and mechanical perfection should see it, and every lady in the land should examine and try the "DAVIS VERTICAL FEED" before deciding to purchase an inferior machine, or a single-thread playing without a tension.

It is impossible to make a strong, elastic, or lock-stitch with any but a shuttle machine.

We are selling WHEELER & WILSON, GROVER & BAKER, SINGER and HOWE Machines for \$10 Each.

For descriptive circulars, price lists, samples of work and terms, apply at the office of the

PACIFIC COAST DEPARTMENT,

130 Post Street, San Francisco, Cal.

MARK SHELTON, AGENT.

Underfed Machines taken in exchange as part payment. Our prices are very low for cash. Branch Office 26 Fourteenth Street, Oakland, Cal.

DRAKE'S BAY COLONY.

Shafter's Rancho, Marin County,
California.

13,600 ACRES,

Between North Pacific Coast Railroad and Pacific Ocean, three hours travel by steamer and railroad from San Francisco.

Schooners make the trip to Drake's Bay in six hours, and to Tomales Bay in nine hours. Produce can be shipped to market from the colony by schooner as well as by rail.

Title—United States patent.

Climate—Unsurpassed for mildness and equability.

Soil—Without exception the richest on the coast.

Water—Abundant. A failure of crop has never been known.

Wood—Sufficient for fire and fencing.

Agriculture—The soil, climate and situation render this property particularly adapted to those who wish desirable homes at a short distance from San Francisco. With the exception of tropical fruits, anything that grows in California can be produced upon this land.

This rancho, famous for its dairies, is now being subdivided into 20, 40 and 80-acre farms, under the auspices of the California Immigrant Union, and will be sold at low figures.

TERMS—One-fourth cash; balance in one, two and three years, with interest at eight per cent. per annum on deferred payments.

For full information, transportation, maps, etc., apply to

WM. H. MARTIN,

General Agent California Immigrant Union.

230 Montgomery Street, Room 23, S. F., Cal.

Parties desiring to visit the tract will be provided with tickets upon application as above.

PACIFIC MAIL STEAMSHIP CO.

The Company's Steamers will sail as follows, at 12 M.:
CITY OF TOKIO.....August 31st.
For YOKOHAMA and HONGKONG.

GEORGIA.....September 5th
For Panama and New York, calling at Mazatlan, San Blas, Manzanillo and Acapulco, connecting with Company's steamer at Acapulco for all Central American ports.

Tickets to and from Europe by any line for sale at the lowest rates.

CITY OF SYDNEY.....September 24, at 12 o'clock, noon,
or on arrival of the English Mails, for HONOLULU, AUCKLAND and SYDNEY.
\$10 additional is charged for passage in Upper Saloon.

CITY OF PANAMA.....August 30th
For Victoria, Port Townsend, Seattle and Tacoma, connecting at Tacoma with Northern Pacific Railroad for Portland, Oregon.

Tickets must be purchased before 11 A. M. on day of sailing, at Wharf office.

For freight or passage apply at the office corner First and Brannan streets.

WILLIAMS, BLANCHARD & CO., AGTS.

Dewey & Co., { 202 } Patent Ag'ts.
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This trade-mark is registered by G. N. Milco, May 7th, 1878, in the Patent Office at Washington, D. C.
The most wonderful discovery of the Nineteenth Century.

This is the true Pyrethrum Carnecum

INSECT POWDER.

A California Production.

Retail price, 25 cts. and 50 cts. per package.

Directions for use with each package.

G. N. MILCO,

Patentee and Sole Manufacturer, Stockton, California.

Ask your druggist and grocer for it.

STEWART & BUCKLEY, Agents,

513 Sansome Street, San Francisco, Cal.

To Lease on Favorable Terms,

50,000 Acres of IRRIGATED LAND in Kern County, with abundance of Water Free, in tracts of 80 acres and upwards, with comfortable House, good Barn, and well of excellent water. Crops are sure, an average of 30 bushels of wheat per acre, and other products in proportion can be expected.

Industrious farmers with stock and implements will there find every advantage in acquiring a home and a competence.

COLONIES WANTED.

For further particulars inquire of

McAFEE BROTHERS,

202 Sansome Street, San Francisco

ESTABLISHED IN 1858.

PEPPER'S NURSERIES.

An unusually fine stock of trees is offered for sale at lowest market rates for reliable nursery stock, comprising all the leading kinds and varieties of hardy fruits. Also a general assortment of evergreen trees and shrubs, blue gums, Monterey cypresses, etc., in boxes for hedge and forest planting.

My trees are grown in a sandy loam, without irrigation; can be no finer rooted trees grown; wood ripens early, and can be safely transplanted as soon as sufficient rain falls for lifting the stock. Early planting recommended. Catalogues with list of prices ready for distribution October 1st.

W. H. PEPPER,
Address, Petaluma, Sonoma Co., Cal.

PACIFIC RURAL PRESS

Volume XVI.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 7, 1878.

Number 10.

Dairy Exports from the Pacific Coast.

We have remarked in former articles the plain fact that in order to realize the fullest profit from capital now invested in dairying in this State, and to warrant further development of our peerless dairy resources, we must find an outlet for the products. We know of no large dairy region in the world which relies on the local consumption for its reward. The Eastern States and Canada would find their dairy interest collapsing, were it not for the immense and growing English demand. Some of the countries in the north of Europe could not support their dairies were it not for English customers. Denmark keeps up a constant fusillade upon the ports south of the equator with her canned butter. The famous fancy French cheeses have all the world for a market; and Switzerland rolls her "grindstones," and pushes her condensed milk everywhere. The genius of the dairy interest of to-day is commerce. Local trade is a good back bone for dairy production, and the stronger it is, the better; but the form and comeliness of the industry, wherever it is largely practiced, are found in extensive exports. The regions devoted to dairying are small in their area when compared with the habitable surface of the globe; and to realize the advantage of this condition, they must distribute their productions.

The experience of the older dairy States, is that markets can be secured by vigorous missionary effort on the part of producers. As soon as central New York caught an inkling of a possible large demand in England, quick steps were taken to secure it. Men came naturally, and as with one mind to a united effort toward a common end. At this point, the "Dairymen's Association," an original American institution, sprang into existence. Meetings of dairymen were crowded and worked by eager enthusiasm. How shall we secure the English demand? was the question in every producer's mouth. Committees studied zealously, and reported hopefully. A special commissioner, Mr. Willard, was sent to England to gain facts and discern possibilities. Everything was done to ascertain what style of product would please the English purchaser. The result is, that last year \$12,500,000 worth of cheese, and \$3,000,000 worth of butter were exported from our Atlantic seaboard to Great Britain.

This result was gained by working for it with common and united action among dairymen. A single producer can do much by inquiry and by pushing a fit product into the avenues his investigation discloses; but his achievement is but small when compared with that possible to an organization of producers working in a common cause. There is no reason why following methods which past experience have proved gloriously practical and effective elsewhere, should not do much to show the dairy producers of this coast where the chances for the growth of their industry lies. No one now has any idea of how much butter and cheese can be disposed of at the ports which we can easily reach

by ocean. An inquiry of this kind should be instantly set on foot by interested producers. The inquiry should be pushed energetically by competent investigators. The expense would be slight if it were borne by all who are interested, and the results might be great. It is not at all probable that we shall find a single customer like England, nor do we need so generous a one. It may be a slower process to win the Asiatic to devotion to the virtues of cheese as a concentrated and cheap food, but there is no reason why it could not be done to a considerable extent in the end. If we develop such a market it is our own. Cheese from the other producing regions cannot cross the equator twice or compass the overland route, with such ease and cheapness as ours can be pushed across the Pacific. We have half the population of the globe within easy distance. From Japan to India the ground is ours. Within the last few

canneries of Copenhagen enjoy the South American trade without a rival? Could we not pour oil upon the troubled waters of Mexico and Central America, and nourish their nervous frames with choice California butter packed in imperishable form? These questions are all pertinent trade questions, and upon their solution depends much of the future of dairying on this coast. The dairymen's meeting will be held in this city during the second week of October. There is the same chance for vigorous and enthusiastic work by united effort among dairymen here as there was at the East, where they stood in the same need of an outlet. We trust that all interested in these questions will make it a point to be present at the meetings and set on foot the needed investigations.

A POTATO ASSASSINATED BY BERMUDA GRASS. —Bermuda grass is now receiving very favor-

The New Pavilion at Los Angeles.

Our engraving on this page gives a view of the pavilion now in course of construction in Los Angeles, by the Southern California Horticultural Society. As may be seen, the structure is of graceful and tasteful design, and therefore quite in harmony with the peerless displays of farm and orchard products which will from year to year be made within its walls. The building will be of large capacity, and it appears from the drawing that abundant provision has been made for free admission of light, an essential to success in an exhibition building. It is easy to imagine something of the beauty the interior will present on the 14th of October next, when the tables will be laden with the richness and variety of southern California's fruit, flowers, cereal and garden products, and the walls wainscoted and frescoed with the tall and handsome growths from corn and cane fields, gardens and greenhouses. The success which the society achieved last year at its first exhibition shows the interest which its work has awakened. Since it has secured its share of the State appropriations and a large accession to its membership, the natural result will be that this year's fair will compare with last year's, as the fruit does with its foregoing blossom.

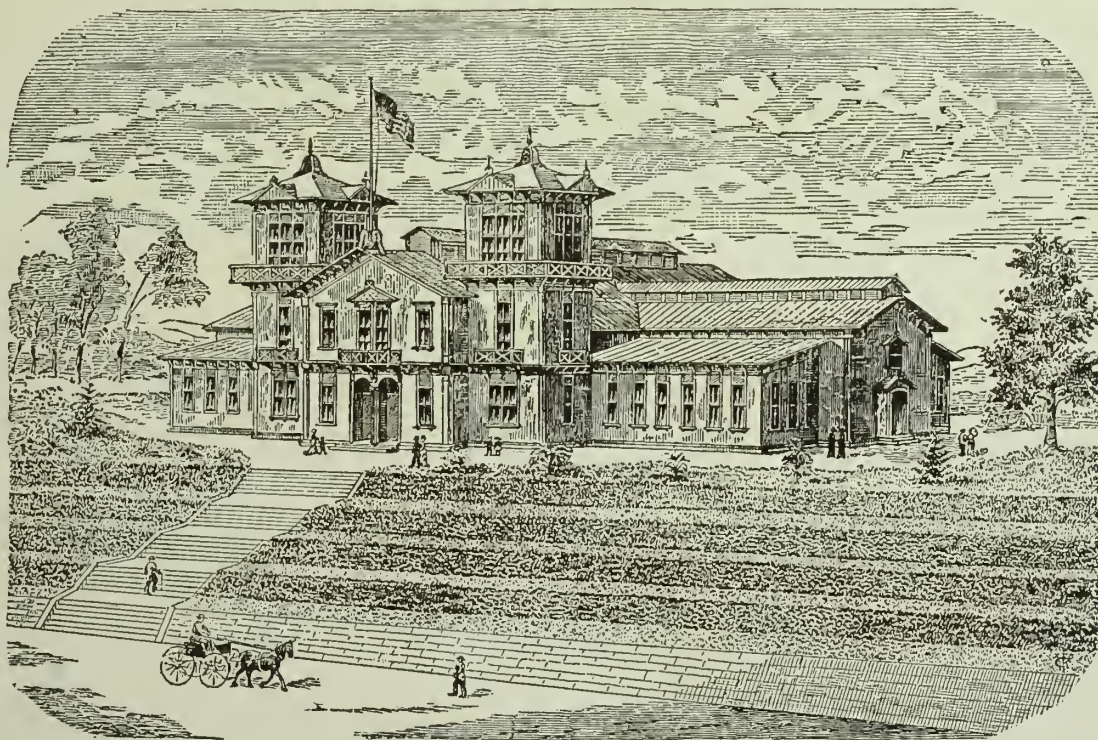
From all the features which we are able to discern at this distance, it appears to us that the uprising of the Southern California Horticultural Society is a credit to the agricultural enterprise of the favored region of our State in which its field lies. The end has been labored for diligently we doubt not by those who have given their time to the organization and promotion of the society, and their's it is to share in the credit of the success. In the building of the pavilion there has been free subscription of both labor and material by those who wish the enterprise to go forward, and therefore it seems an undertaking which enjoys the popular pride and co-operation. We expect that the fair in October will embody and materialize this popular interest in a marked degree, and that the display will be one, which for richness, beauty and intrinsic excellence, one might circle the globe without finding a rival in its special field. Thus, at least, we hope and trust it may be.

Ridding a Dog of Tape Worm.

EDITORS PRESS:—Will you please be so kind as to inform me through the columns of your valuable paper how I may extract a tape worm from a valuable dog?—ENQUIRER, S. F.

This can often be accomplished by administering a tea made of pumpkin seeds. The specific as a tape vermifuge is a preparation made from an Indian herb and called "Kousso." There are both French and English preparations, and they are largely used in Europe where tape worm is much more prevalent than in this country. Have our readers any remedies to recommend, from their experience?

DURING August the San Francisco mint coined 1,905,000 pieces; value, \$5,609,000.



SOUTHERN CALIFORNIA HORTICULTURAL SOCIETY'S PAVILION IN LOS ANGELES.

months our cheese has gained entry in Siam, and for several years it has been going to China and Japan. The amounts are rather small it is true, but the wedge may be entered. According to reports furnished by the United States Bureau of Statistics, the exports of our dairy goods to the coast of Asia for the year 1877 were as follows:

	China.	Japan.
Butter, pounds.....	30,793	57,881
Cheese, pounds.....	39,996	4,076

Is this amount wholly taken by the foreign population to these countries, or are the natives beginning to nibble at our cheese and butter? If they are, what can be done to encourage them in it? What style of manufacture will be most apt to tempt them? What measures are to be taken to deliver the product in its best condition? All these points and many others like them should be ascertained and made known to all producers. They can be only gained by careful and persistent investigation, and no one but producers have interest enough in the subject to push and pay for the investigation.

Nor is the eastern coast of Asia the only region to be studied. Why should the butter

able attention at the hands of correspondents of the PRESS. They generally add a proviso that the plant should not be introduced except in situations where the grower is disposed to give it undisputed sway. This should be borne in mind, and to show that the grass has a history as a pest as well as a friend, we quote as follows from a letter to the *Country Gentleman*: "I mail you a potato pierced by a root of what we call cane grass, or Bermuda grass. The prayer of our farmers is, that they may be delivered from it, and all such. I have seen it growing out of the red clay on the side of a railroad cut and hanging down 10 feet or more." Therefore, as we have said before, let all beware of installing the Bermuda in places where they would not have it spread. Let it be noted also that the true botanical name of the grass is *Cynodon dactylon*, and not *Agnodon*, etc., as the typos have it on the following page. We would note also that there was an error in punctuation in Mr. Hebborn's article last week. He intended to say of the grass: "Where it has plenty of moisture it is doing well and spreading rapidly." On the hills it is still green, etc.



CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents. — EDS.

Dottings in San Mateo County.

EDITORS PRESS:—San Mateo county lies immediately south of the city and county of San Francisco. It is bordered its entire length on the East by the Bay of San Francisco, and on the west by the Pacific ocean, the Coast Range of mountains dividing the inhabited parts into two very distinct settlements.

The Southern Pacific railroad passes through the eastern portion, with stations here and there. The soil at many points along the line of the road is good. Maury a neat little cottage or stancher farm house sits cosily on the grassy lawn or peeps forth in the distance from groves of the Australian gum, or clumps of live oak "to the manor born," while some of the private residences of the wealthier classes of your great city are simply palatial, grand and beautiful beyond description; all, in fact, that the combined efforts of nature, art and cultivated taste could make them. A description of their flowers, shrubbery, ornamental trees, artificial grottos, lakes and fountains and other countless beauties must be left to a more facile pen than mine.

Reservoir and Ocean View.

Crossing the mountains from San Mateo by a turnpike road of good easy grade, the eye unexpectedly falls on what seems to be a beautiful mountain lake, with water apparently as pure and clear as that of Donner or Tahoe of the high Sierra. It proves to be the reservoir of the Spring Valley Water Works, hid away here in the very heart of the mountains, and kept constantly fed by cool gushing springs and sparkling rills from their sloping sides. It is the chief source of supply for the best and purest water furnished your city. Arriving at the summit, you look down upon the far-distant ocean, now "silent to the ear and tranquil to the eye," and catch an occasional glimpse of its sunlit bosom through the lifting, floating fleeces of fog, as ever and anon they part and coningle like the great, restless, rolling waters beneath them.

Half Moon Bay.

So named for its form, with its crescent-shaped valley, now greets the eye, with its well-tilled farms of grain, potatoes or flax, the principle staples of the Coast Range. All along the ocean side, for 40 miles or more, the country is well populated and under a good state of cultivation.

The principal villages of this portion of the county are Half Moon Bay, better known perhaps as Spanishtown, from its original settlers, Purissima, San Gregorio and Pescadero. The soil of this whole region may be considered of a rather fine quality, consisting mostly of a black sandy loam. There are many miles of good level valley land, more particularly around Half Moon Bay and along the creeks, putting into the ocean in the vicinity of Pescadero and other points. The face of the country is otherwise much broken, but the soil is often deep and fertile to the very summits of the highest surrounding foothills. Having thus given a little general sketch, the reader is now prepared for some odds and ends of fruit or flowers, as the case may be, as may have been hastily plucked by the way.

The Grain Crop.

More particularly of wheat and oats, owing to the rust, will fall much short of what was some time ago anticipated. Some exceptional cases, however, of large yields are reported on both sides of the Range. The Ravenswood ranch, near Menlo Park, from 295 acres turned out 10,000 bags of clean barley, 110 pounds to the sack, all of which was threshed out in 13 days. The oats about Pescadero were looking remarkably well. Mr. Alex. Moore and others were expecting as much as 75 bushels to the acre; but, judging from the results in other parts of the county similarly situated, they will more than likely be disappointed.

The Potatoes are Badly Blighted.

All along the western side of the county there has been more or less of the blight for several years. There seems to be no settled theory among the farmers as to the cause, but many men are of many minds. One thinks it is owing to continuous cultivation of potatoes for years without change of crop; another attributes it to a very small bug to be found on the stock and stem; a third to atmospheric influences, looking upon the bug as an effect and not the cause of the blight, and so on to the end of the chapter. The cause, however, is only important in view of its bearing on the remedy. Some advances have been recently made, which, although not a preventive of the blight, will enable the farmer to avoid in a great measure its devastating effects. This is done by planting a variety that matures earlier than the ordinary red potato, formerly almost exclusively grown. Some interesting experiments have been made within the past two years by the Buchart brothers at San Gregorio, with the view of ascertaining the best varieties to accomplish the end desired. Among those tried, the common red proved the poorest; Patterson's Victoria and the Kidney were little

better. The Salt Lake Goodrich they do not consider fully tested. The Garnet and Puget Sound did very well, but the Climax and Jackson White, the last named thought to have been originally from England, seemed to have effectually escaped the effects of the disease, which is attributed mainly to rare rapidity of growth, the potato having time to mature before being attacked. One acre from this seed measured last year 150 sacks of 110 pounds each.

Some are beginning to turn

Attention to Flax.

Not for the fiber but for the seed, which is said to be contracted for in advance by the Pacific oil and lead works of your city, at 3½ cents per pound, or at the rate of \$65 per ton. It is thought to be a profitable crop. One yield was reported as high as 1,400 pounds per acre, which is probably above the average. The number of acres put in the present season in the vicinity of Pescadero is variously estimated from 1,200 to 1,500. Its mode of cultivation, from the preparation of the ground to the cutting and threshing, is in all respects similar to the treatment of small grain. In this connection it may be well to state that some seed shipped from Calcutta and put in on the Dale ranch, at San Gregorio, was struck with the red rust, while the California flax, growing side by side, escaped the effects of the blight. In this same neighborhood Dr. Emerson has about four acres of

Canary Seed.

Which is looking splendidly. It has been known to yield here on choice land as much as 1,200 pounds to the acre, and to bring as high as 25 cents per pound by the wholesale, both of which are far above the average. The price has been known as low as three cents, as the market is soon glutted. It is sown broadcast by hand, from 25 to 30 pounds to the acre, and cut and threshed as grain.

Buckwheat also seems to do well. Mr. Harsha, on San Gregorio creek, has a few acres. Although standing rather thin on the ground, in other respects it will equal the best to be seen in the Atlantic States.

Chickens, Ducks, etc.

In this same vicinity some very fine young Pekin ducks were met with for the first time on the ranch of Mr. J. G. Richardson. They were only three months old and weighed from six to seven pounds apiece. Several of the best breeds of chickens may be seen here. Mrs. R., who has charge of the poultry yard, looks upon the brown Leghorns as the best layers among the different varieties so far as thoroughly tested. One hen, now three years of age, has laid eggs every season from early spring to late in the autumn, without offering to go a "setting."

Sheep are scarce, but hogs are somewhat plentiful, a few being found on nearly every ranch, while one here and there among the farmers makes it a business, thinking it more profitable to feed their grain to hogs than to store and ship it.

A fine Patchen horse was seen at the stable of Mr. J. Schuyler, proprietor of the Schuyler hotel, at Half Moon Bay. He is a beautiful specimen of the trotting stock, six years old and sired by "Washington," the property of Messrs. Miller & Lux, of San Francisco.

As to thoroughbred cattle, too much could scarcely be said in praise of those magnificent Durhams of your correspondent, Mr. Robert Ashburner, some account of which has already appeared in the *RURAL*. They were imported, and are bred chiefly with an eye to the best interests of

The Dairy.

In which he is extensively engaged. This, by the way, is one of the most important and profitable interests of the county. As it has already received considerable attention from your editorial accounts of visits to the dairies of Mr. Ashburner, Jersey Farm and the Steele Bros. below Pescadero, the whole subject may well be dispatched by me with a single fact, furnished by Mr. I. G. Knowles, of Schoolhouse station. He finds a decided advantage in

Scalding his Cream.

(claiming that every disagreeable taste and odor is evaporated by the heat, thereby making a sweeter and better quality of butter. The vessel is set in hot or boiling water, and the cream occasionally stirred.

The *RURAL PRESS* should be like the good man "that bringeth forth from his treasure things new and old." The following

Recipe for Killing Squirrels

Has been found so effectual by Mr. W. M. Newhall, of Belmont, that it will bear repeating: He puts two quarts of wheat into a vessel and pours on boiling water, letting it boil until the kernel can be mashed between the thumb and finger. He next takes three small bottles of strychnine (the size used containing one-eighth of an ounce each) and pulverizes it to the fineness of flour. The water is now strained from the wheat, a pint of brown sugar added and thoroughly mixed, and the whole sprinkled with the strychnine, which after proper stirring and mixing is ready for use. A teaspoonful to a hole is considered an ample dose.

A Wonder Among Machines.

Two of the Wood's self-binding harvesters are at work in the vicinity of Pescadero and are giving excellent satisfaction. Mr. N. M. Brown has cut with one of them some 305 acres of oats and barley, the most of it on rough ground and steep hillsides. He has found it equal to the task with a cost of less than \$5 for repairs. It works like a charm. It seems more like a thing of life than a machine, so human-

like does it gather the grain in its grasp, fasten the bundle, and then hurl it, sometimes, for many feet, to its allotted place on the ground.

A Railroad Wanted and Needed.

A line along the ocean beach from San Francisco to Santa Cruz is an all-absorbing topic at present. It has the advantage of being much the shorter route, the distance being only 71 miles. It is 120 by the Southern Pacific. This part of the county is much isolated and very inconveniently situated in reference to market except at certain seasons of the year. From what has already been said as to the soil, it must be evident that it is a rich and desirable section, the scenery fine, the view from the ocean grand and imposing; its cool climate is exceedingly attractive to visitors from the interior during our long hot summer months. The Schuyler house at Half Moon Bay, and the Swanton house at Pescadero, are both fitted up in good style with a view to the accommodation of pleasure seekers, who find a fund of amusement in fishing and hunting, or among the shells, pebbles and sea mosses found in such abundance, variety and beauty all along the beach.

It is said that some 800,000 sacks of grain and potatoes will be shipped the present season from Half Moon Bay, with probably as much more from Pescadero and Pigeon Point, to say nothing of flax, butter, cheese, poultry and other products. There are also as many as ten saw-mills on this side of the range, making the shingle and lumber business under favorable conditions no insignificant item; from all of which it must be apparent that a road here is much needed.

Where there is a will there is usually a way. It is to be hoped that it will soon be undertaken and carried to completion.

A. C. K.

Fruit Growing on the Foothills.

EDITORS PRESS:—Being a subscriber of your excellent paper, the *PACIFIC RURAL PRESS*, I take the liberty to send you a small case of grapes and one of peaches. The vines that I gathered the grapes from are four years old from the cuttings, and are turning off about 30 pounds to the vine on an average. There are 700 vines to the acre, and I have been shipping them at the rate of \$100 per ton.

I have 120 peach trees: half three years old and half four years old. Seventy of them have been picked and averaged nine cases of peaches to the tree that brought me from \$1.50 to \$2 per case; and I am gathering from the other 50 trees and think they will do quite as well as the first 70. They are growing on about seven-eighths of an acre of land, and I took off \$400 worth of strawberries from the same ground this spring.

I came to this place about four and a half years ago. The land was so covered with brush that no one dared to tackle it. I have put out 30,000 trees and plants all with my own hands. The first year I took off \$1,200 worth of produce; the second, \$1,800 worth; the third, \$2,600 worth; and I think this season I will realize about \$4,000 worth. I am over 50 years of age. I also have about 20 tons of hay which I had to cut with a scythe, and I cut it all mornings before breakfast.

I started in with \$1,000 that I earned working by the month. I would not thank a man to offer me \$10,000 for my little farm and one-half of my trees have not brought me in a dollar yet.

My companion is the *PACIFIC RURAL PRESS*, and a good companion it is. I would not be without it for \$20 a year. I consider that I get \$4 worth of knowledge from every number.

D. A. ELLIOTT.

New Castle, Placer county, Cal.

This simple recital of experience teaches many lessons. A man who has thus brought himself up to a competence by constant industry and the wise use of small savings, is entitled to the respect and honor of the community. The fruit sent us is of the highest order. The grapes, which we have placed on exhibition at the Mechanics' fair, are the finest which have been shown there up to this time.—EDS. PRESS.

Corrections in Sacramento County Notes.

EDITORS PRESS:—In my last, from Sacramento the type made me say some things not intended. When fine flavor of the strawberry was transformed in a twinkling to "the fineness of flour," the mistake only raised a smile; but when one of my most interesting facts was shorn of its novelty and usefulness by the simple alteration of a letter or so, I thought it of sufficient importance to ask the favor of making the proper correction, the first called for in many years of correspondence. In allusion to the residents on the overflowed lands along the banks of the Sacramento, it was not my intention to say that "some, taking time by the forelock, sowed alfalfa seed in the winter," which really, in this instance, was not the fact. On the contrary, it was probably late in the spring, as it was sowed in the water (as intended to be stated) just before it retired within the banks of the river, the seed taking root and getting a well set growth before the usual cracking and drying out process of the sedimentary deposit got too far advanced to kill out the alfalfa. So much by way of explanation.

A. C. K.

Bermuda Grass on Alkali Soils.

EDITORS PRESS:—There has of late been considerable discussion in your paper on the merits and demerits of Bermuda grass. We have a grass here which is said to be Bermuda grass by parties who profess to know it. I inclose seed stalks for your inspection. It has been planted here for the purpose of making grass plats, as it grows and keeps green without irrigation on any land that is tolerably moist, producing a thick growth of fine, tender green grass, much relished by stock. It takes kindly to our valley lands everywhere that it has been tried.

But the fact to which I wish to direct attention is that it seems to grow and do better on strong alkali ground than anywhere else. A resident of Garden Grove, a village some four miles from here, built his house on land so strongly alkaline that he found it impossible to raise flowers, trees or shrubbery of any kind, the alkali killing them in a short time. He then obtained a small package of the roots of this grass, a specimen of which is inclosed, and planted two rows of it about 10 feet apart and about three feet apart in the row. On February last, in this strong alkaline soil, it grew and spread with great rapidity, and at this time each row has formed a belt of solid grass, four feet wide, the grass standing green and beautiful, about 18 inches high, just as thick as it can stand. When tramped upon, it seems as if one was treading on wood. I doubt if any ordinary amount of tramping would have much effect upon it. Immediately after being planted it sends out runners in every direction. On each of these runners knots are formed about two inches apart. These knots send down roots. After rooting each knot becomes a head center and sends out runners. At first the growth is entirely lateral, but as soon as any portion of ground is fully occupied, the upright growth commences, and this is so thick that I think it would smother out any kind of weeds or other growth. So rapid is this growth that I think if suitable ground was prepared, as if for corn, and roots planted four feet apart each May, I should judge that in less than six months the whole surface of the ground would be occupied, and a tract of heretofore unproductive and worthless alkali land would become a most valuable tract of pasture.

As there are among our moist lands in this section and elsewhere in California, numerous alkaline spots, and sometimes tolerably large ones that produce nothing until they have been reclaimed, and as reclamation, although quite practicable in most instances, is expensive and troublesome, consequently if they can be set in Bermuda grass and become valuable as pasture land, I consider that a most important discovery has been made. Alfalfa will grow on tolerably strong alkali land, provided that the water is not less than three feet from the surface. If less it is apt to drown out. But this grass I think will stand almost any amount of water and an ordinary overflow would not affect it at all. In this valley most of the alkaline lands are too wet for alfalfa, and I am going to test this matter thoroughly, as I consider it of great importance.

As the natural grasses that grow on strong alkaline land are apt to have either a salty or alkaline taste, to test this I tasted the grass, and, finding it sweet, I led a horse to it. He smelt it, took a bite, and, liking the taste, he seemed to want it all, for he immediately thrust his head in up to his eyes, and when I took him away afterwards, objected to the proceeding. This satisfied me as to the quality. Judging from its rapid growth, I think it will produce a great deal of feed and make these heretofore worthless lands the most valuable of pasture or dairy lands. I write this for the purpose of inducing others to test this matter. After I have learned more I will write again.

I would, however, caution every one against planting it where they do not want it to remain, as it cannot be cultivated out. It can, however, be easily destroyed by mulching, covering it with a heavy mulch of straw. It smothers it out in a couple of weeks.

Wm. R. ALDEN.

Anaheim, Los Angeles Co.

[This is an interesting chapter in the Bermuda business. There is no doubt about the truth of the grass to its name, as Prof. Hilgard, to whom we sent the specimen, replies that they are the genuine Bermuda grass (*Aynodon dactylon*).—EDS. PRESS.]

SACRAMENTO DRAINAGE COMMISSION.—A dispatch from Dixon, Solano county, says: The Commissioners of the Sacramento drainage district, comprising W. F. Knox, R. S. Carey and M. Egbert, with their secretary, Chris. Green, made a personal inspection of the lower end of the proposed canal line. The Commissioners were accompanied by Gov. Irwin, Gen. B. F. Alexander, Col. Mendell, chief engineer of the survey; Col. J. W. Smith, assistant engineer Pierson, and W. H. Mills, of Sacramento. The party left Elmira at 10 o'clock today and drove to Denver, where the mouth of the proposed canal is located. After an examination on the ground of the field notes, the party followed the line of the canal to a point near Maine Prairie. The entire party reached here at half-past six this evening, and will leave in carriages to-morrow morning to inspect the mouth of Putah creek; thence they will drive to Knight's landing, returning to Sacramento by boat.

THE STOCK YARD.

What is a Fashionable Short Horn Pedigree?

EDITORS PRESS:—The above question suggested itself to my mind upon the perusal of the sale catalogue of B. B. Groom's herd, recently sold in Kentucky, and to those interested in Short Horn literature no better answer can be found to it than may be obtained by studying the results of the sale, and comparing the prices with pedigrees, the majority of which are of a very mixed character.

No doubt but to many of your readers a pedigree is nothing more than two columns of names, and one of figures; but to those who aspire to success in breeding, the study of pedigrees is one of the most essential requisites. And yet the majority of those who own and breed Short Horns in this State, cannot tell a first-class, a pure, or a fashionable pedigree from a medium one, or a medium from a purely indifferent one, one that adds very little to the value of a breeding animal in the market as a breeder. It would eventually add much to both the pleasure and profit of breeders if they could by their knowledge of pedigrees, to a certain extent, adopt the practices of those who have been most successful as breeders. I do not refer to speculators, or to those who buy and sell on the merits alone of what they call a pure pedigree of this or that strain, of whatever family it may be.

There is no doubt but a great deal of harm has been done to the Short Horn interest by breeding for pedigree alone, irrespective of the personal merits of the animals themselves, whatever the "purists" may say to the contrary, though a few of them will admit that harm has been done; but so long as the "straight" bred ones will sell for more money than those that are a little "mixed" with the blood of other families, the majority of them will forego a straight back in preference to a straight pedigree, knowing well (or they ought to know) at the same time that where a mild outcross has been occasionally taken upon certain families, that branch containing the infusion of fresh blood has, as a rule, produced more and better animals than those kept strictly pure by too close in-and-in breeding.

Take the highest-priced Short Horn family living, the "Duchess," as an example, of which the most prolific branches have Booth blood in their veins, introduced by some or other of the following bulls, viz.: "Lord George" (10,439), a pure Booth bull, who was the sire of "Second Duke of Athol" (11,376), who was the sire of "Second Duchess of Airdrie," the ancestress, I believe, of all of that family; and now bulls of the same family are being used in some of the best herds in the world. Then there is "Grand Turk" (12,969), by "Grand Duke" (10,284), dam "Young Rachel," a pure Booth cow; "Prince Imperial" (15,095), by "Second Grand Duke" (12,961), dam "Bridecake," a pure Booth cow; "El Hakim" (15,984), by "Grand Duke" (10,284), dam "Fame," a pure Booth cow; "Imperial Duke" (18,083), by "Second Grand Duke" (12,961), dam a Knightley cow; and beyond all of which is the most direct out-cross of all in "Usurer" (9,703), descended from Mr. Mason's No. 25, the sire of "Duchess 67th," who was calved 26 years ago. There are now very few of the family living, cows or bulls, that have not more or less of the blood of the above-named bulls in their veins, and to its introduction, directly or indirectly, there can be little doubt but they are a good deal indebted both in numerical and constitutional strength.

Of the Bates bred families the Oxforas rank next. Of this family the Duke of Devonshire had a larger number of cows and heifers than any other herder, and such cows and heifers, as I saw then, three years ago—all descended from two cows! the descendants of one of which two consecutive outcrosses in the bulls Priam, and Earl of Warwick, the latter a Princess bull. Now we find Col. Ganter, one of the largest owners—if not the largest—of Duchesses, using a bull of this branch, the 18th Duke of Oxford, upon his Duchess cows, notwithstanding the above named outcrosses; and there has recently been purchased for use in the Duke of Devonshire's herd the 7th "Duke of Gloster," a direct descendant of 2d "Duchess of Airdrie," above named.

It will be observed that no direct, or full cross of Booth blood has been put upon Bates cows; but Booth cows, the foundation of whose pedigree were rich in Collin's blood, were bred to the best of Bates bulls, and the produce being bulls (in example quoted) were used upon a few of the Duchess cows, thus introducing fresh blood without using a too-violent outcross, and afterwards breeding back to Bates bulls again, as it has been proved by experience that a more fixed type or family character can be depended upon by sticking tolerably close to bulls of the same strains of blood. For these reasons, I would say to beginners: first of all, get the best blood you can to begin with, old blood, and stick to it.

I will now notice briefly the sale of B. B. Groom's Short Horns, the results of which plainly show that the best blood still "wins the day": six cows and heifers of the Bates wild-eyes family, (two of the cows being 14 years old each) sold for an average of \$1,580 each.

Kirklevingtons sold for \$2,000, \$2,800, \$750, and \$500 each, the two lowest priced ones being in their 11th and 12th years respectively, and said to be doubtful breeders.

Two Oxford cows only brought \$1,000 apiece; so we may safely infer that there was something wrong with them.

One cow of the Barrington, or Sally family sold for \$1,525; another for \$1,550; and a third one of the same family having two direct outcrosses on top, only brought \$405.

Four of the Bates bred Hawkeyes sold for \$560, \$605, \$630, and \$170 each, the last being a 15 year old cow, however.

Twelve Craggs made an average of \$587 each; whilst three of the same family, with direct outcrosses averaged \$146 each.

Three of the Fletcher family, the only ones in the catalogue up to the recognized standard of purity (and one of these, the lowest priced one, was by "Baron Hubback 2d," a noted Townly-bred bull) sold for \$1,325, \$725, and \$800 each. Five others of the same family, with an outcross at or near the top, made from \$150 to \$260 each.

A number of Duenna Duchesses made an average of about \$200 each; but as there is not a "straight" bred one in the catalogue, no opportunity for comparison of prices is afforded. The "Rose of Sharon's" made an average of about \$1000 each.

I have quoted the leading Bates families only, taking the prices from the *Live Stock Journal*, enough I think to show that those who have Short Horns with fashionable pedigrees ought to be careful to use the right kinds of bulls. As may be seen from the above, recent and direct outcrossing has reduced the prices to about one-fourth of those obtained for animals bred up to the recognized standard of purity.

Upon the whole the sale may fairly be looked upon as a success. 131 cows and heifers were catalogued, about 30 of which, I believe, were either barren cows, or otherwise not fit to offer as breeding stock. The remaining 100 head made an average of a trifle over \$550 each, terms cash. Such prices, I think, obtained for so many head of cattle in one day, give us breeders every reason to think that "the bottom has not dropped out" of the old and fashionable pedigrees yet—as one sometimes hears it said of an old mine. There is to be a sale of a very select lot of Bates cattle on the 18th of September, and I have it from a reliable source that a higher average than has ever been made at any public sale of Short Horns is confidently expected on that day. This is some encouragement to us Californians who are breeding in a small way, and for comparatively small prices, to "keep up our pluck" as they say, and plod on, ever remembering that we can only achieve success by deserving it.

ROBERT ASHBURNER.

Baden Station, San Mateo county, August 31, 1878.

HORTICULTURE.

How to Prune.

EDITORS PRESS:—"What do you think of my young peach trees?" said a neighbor a while ago, as I was looking at his young trees set last winter. I said they looked well, only the pruning was a bad job. "May be it is," he said; "but a man that ought to know, told me that all the young shoots coming out on the body of the tree for two or three feet up, ought to be cut off, as they were taking the nourishment from the tree and were of no use, as he should let the trees branch out higher up to form the top. I, not being experienced in the matter, took his advice. Now what is wrong about it?"

I told him there were two wrongs about it: first, the limbs he cut off should have been left to form the top, as it is better for several reasons to have the top formed low down, and for this reason it was wrong; and if he preferred the top to be higher up, it was a heavy backset to the tree to strip all the young limbs from it now and expose the naked body to the hot sun all summer.

Now I will tell you how I do with my young trees, and why I do it. I am careful not to disturb the buds on the body of the young trees when I am setting them, so as to encourage the growth of as many shoots as I can on the body of the trees from the ground up. I do this because it gives protection to the tree from the hot sun and other things, and gives the tree vitality and a stout, stocky growth. It also affords an opportunity to form the top as I want it. After the young shoots are well under way, I cut out such as I do not want, leaving some all along from the ground up to form the top. In this way I can have the top well balanced, and the limbs at proper distances apart, and not too high up. I suffer no forks to form, to finally split down and spoil the tree. The body of a young tree will make nearly twice the growth each season for several years, if the limbs are left on the body of the tree, than it will if they are taken off. You will find by trying it that a young tree will grow much faster and more stocky by letting most of the young shoots remain on the body of the tree.

I passed through a neighbor's young orchard once in company with the owner just as the young shoots were starting all along the body of the young trees; and as he would come to a

tree he would strip off all the leaves and young shoots from the body of the tree for three or four feet up, and I observed that his trees made a very poor growth that season, and they had to be tied to stakes for several years to keep them from being blown over by the wind, they grew so tall and slender. When they came to bearing fruit, he would frequently have as many as half a dozen props about a tree to keep the long, switchy limbs from breaking down. Now I thought this to be all wrong, and when I commenced growing trees, I pruned close when setting, and then let the limbs grow low down on the body of the tree, thinning out as they become too thick, and shortening in when they get too long. I never stake my trees, nor use props for the limbs, but prune so that the tree will bear its own burden. M. P. OWENS.

Soquel, Cal.

The Atlantic and Pacific Forests.—No. 3.

(By PROF. ASA GRAY.)

I cannot pretend to account for the extreme magnificence of this Sierra forest. Its rainfall is in winter, and of unknown but large amount. Doubtless most of it is in snow, of which 50 or 60 feet falls in some winters, and different from the coast and in Oregon, where it falls as rain, and at a temperature which does not suspend vegetable action, here the winter must be complete cessation. But with such great snow-fall the supply of moisture to the soil should be abundant and lasting.

Then the Sierra, much loftier than the Coast ranges, rising from 7,000 or 8,000 to 11,000 and 14,000 feet, is refreshed in summer by the winds from the Pacific, from which it takes the last drop of available moisture; and mountains of such altitude, to which moisture from whatever source or direction must necessarily be attracted, are always expected to support forests, at least when not cut off from sea-winds by interposed chains of equal altitude. Trees such mountains will have. The only and the real wonder is that the Sierra Nevada should rear such immense trees!

Moreover, we shall see that this forest is rich and superlative in one line; that, beyond one favored tribe, it is meagre enough. Such for situation and extent and surrounding conditions are the two forests, the Atlantic and the Pacific, which are to be compared.

In order to come to this comparison, I must refrain from all account of the intervening forest of the Rocky mountains, only saying that it is comparatively poor in the size of its trees and the number of species; that few of its species are peculiar, and those mostly in the southern part and of the Mexican plateau type; that they are common to the mountain chains which lie between, stretched north and south *en echelon*, all through that arid or desert region of Utah and Nevada, of which the larger part belongs to the great basin between the Rocky mountains and the Sierra Nevada; that most of the Rocky mountain trees are identical in species with those of the Pacific forest, except far north, where a few of our eastern ones are intermingled. I may add that the Rocky mountains proper get from 12 to 20 inches of rain in the year, mostly in winter snow, some in summer showers.

But the interior mountains get little and the plains or valleys between them less; the Sierra arresting nearly all the moisture coming from the Pacific, the Rocky mountains all coming from the Atlantic side.

Forests being my subject, I must not tarry on the woodless plain, on an average 500 miles wide, which lies between what forest there is in the Rocky mountains and the western border of our Eastern wooded region. Why this great sloping plain should be woodless, except where some cotton-woods and their like mark the course of the traversing rivers, is, on the whole, evident enough. Great interior plains in temperate latitudes are almost woodless, even when not very arid. This of ours is not arid to the degree that the corresponding regions west of the rocky mountains are. The moisture from the Pacific which those would otherwise share is, as we have seen, arrested on or near the western border by the Coast Ranges and again by the Sierra Nevada; and so the interior, except for the mountains, is all but desert.

On the eastern side of the continent, the moisture supplied by the Atlantic and the Gulf of Mexico meets no such obstruction. So the diminution of rainfall is gradual instead of abrupt. But this moisture is spread over a vast surface, and it is naturally bestowed first and most on the seaboard district and least on the remote interior. From the lower Mississippi eastward and northward, including the Ohio river basin, and so to the coast and up to Nova Scotia, there is an average of 47 inches of rain in the year. This diminishes rather steadily westward, especially northwestward, and the western border of the ultra-Mississippian plain gets less than 20 inches.

Indeed, from the great prevalence of westerly and southerly winds, what precipitation of moisture there is on our western plains is not from Atlantic sources nor much from the Gulf. The rain-chart plainly shows that the water raised from the heated Gulf is mainly carried northward and eastward. It is this which has given us the Atlantic forest region, and it is the limitation of this which bounds that forest at the west. The line on the rain-chart indicating 24 inches of annual rain is not far from the line of the western limit of trees, except far north, beyond the great lakes, where, in the coolness of high latitudes, as in the coolness of mountains, a loss amount of rainfall suffices for forest growth.

Wo see then why our great plains grow bare as we proceed from the Mississippi westward, though we wonder why this should take place so soon and so abruptly as it does. But, as already stated, the general course of the wind-bearing rains from the Gulf and beyond is such as to water well the Mississippi valley and all eastward, but not the district west of it.

[To be Continued.]

Rare Plants in Los Angeles.

EDITORS PRESS:—I wish you could see our *Musa ensati*, as I am sure you would say it is the finest vegetation to be seen. The leaves are enormous, and still getting larger. Some of them now, with the petiole, about ten feet long and about two and one-half to three feet wide. The trunk underneath is about two to two and one-half feet in diameter. It seems that this plant when full grown, becomes about forty feet high; and its leaves with the petioles, from sixteen to eighteen feet long, and the blade about eight feet and more long, and the diameter about four feet. Our plant is only one and one-half year from the seed. The leaves of this variety do not split like the others, and it stands more frost than any other.

I have a vine called "Lardizabala," which seems to produce an excellent fruit. It comes from Chili. It is not a passion vine. The leaves and flowers are very pretty.

Our Japanese persimmons do very well. One from last year's graft on Italian persimmon stock (*Diospyros Lotus*) set about fifty fruit, and I hope to save many of them. I have one graft from this year's growth which begins to blossom now; and I am really anxious to see whether it will set and ripen the fruit. F. GRELCK.

Los Angeles, Cal.

Planting Orange Trees.

EDITORS PRESS:—During a trip through the northern part of the State not long ago, I noticed a great many trees had been planted since I visited that locality 18 months ago; but I observed that the trees are as a rule planted too close together. I noted this especially as regards orange trees, which should never be planted less than 30 feet apart. I saw many planted less than 20 feet. The opinion of all leading orange growers is that the orange tree requires a great deal of room, as its roots do not penetrate the ground deeply but spread out a long distance. At the celebrated orchard of Mr. Rose there are some old trees only about 20 feet apart one way, but no fruit grows on the inside of the trees in that direction, as the branches of the trees mingle with each other. The best laid out orchard in this county is that of Sir Robert Burnet, where the trees are planted 32 feet apart each way. All our leading orchardists agree that 30 feet is near enough. As your subscribers in the northern part of the State are planting largely of the orange, and its culture is new to many of them, I thought that a word on this subject from an experienced man might not be amiss. S.

Los Angeles, Aug. 19.

NEW PROCESS OF SHIPBUILDING.—A new mode of constructing iron or steel ships has been invented by Mr. J. Humphrys, general manager of the Barrow Shipbuilding Company in England. By his mode of construction, which is on the longitudinal system, whereby the maximum strength is obtained by the minimum weight, the dependence on skilled manual labor which is now so eminently characteristic of the present method of shipbuilding is altogether obviated, the fabric being most readily and simply constructed by the employment of channel sections of iron or steel, and the riveting effected by mechanical rivets, such as Tweddle's. The fabric is erected in permanent buildings specially designed for the purpose, whereby the present expensive system of frame, floor-plate bending, hand templating for the skin and other plating, shoeing and ribbing, hand riveting, etc., all of which are dependent on skilled manual labor, are all dispensed with, mechanical appliances and unskilled labor taking their place, the result being that a stronger, lighter, and less expensive fabric is produced, and a considerable saving in the time required for building is effected.

AMERICAN SUCCESS AT PARIS.—A dispatch from the Paris Exposition says: In the award of prizes at the Paris Exposition, the United States agricultural exhibit has received a diploma of honor and the United States educational exhibit a gold medal. Of the eleven objects of art offered by the Agricultural Society of France for exceptional merit in agricultural machinery in the recent field trials eight have been awarded to American inventions. Dr. Edward H. Knight, the American juror of Class No. 76, has been authorized to announce the awards. They are as follows: McCormick's binding reaper, Wood's binder, Osborne's binder, Johnston's harvester, Whitley's harvester, Doore's gang plow, Diederick's hay press, the Chicago hay press. The above eight prizes are independent of the medals of the exhibition.

AMERICAN LOCKS ABROAD.—According to a Paris journal, the locks displayed in the American Department at the Exhibition are incomparably finer and more perfect in every way than anything of the kind ever before seen in Europe, at any rate in France.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Notes in Sacramento.

EDITORS PRESS:—The coddling moth or miller is the farmers' pest. It has made a larger inroad this year than ever before. The apple was first attacked, then the pear, and in some instances the peach. The subject was recently discussed in the Grange. The only partial remedy spoken of, except those generally known, was the wrapping the trunk of the tree with a narrow strip of cotton flannel, outside of which is put a wider strip of paper, leaving a margin of an inch, top and bottom. Into the flannel the larvæ passes in its upward or downward course. Each week remove it and run it through a clothes wringer, then replace it on the tree. Continue this from April to July. It is also observed the red ant attacks the larvæ of the miller in their hiding places and destroys them.

Placing a tar barrel with light inside by night was spoken of. The light attracts the miller and she is caught in the tar. The continual working up of the soil at the base of the tree has a good effect, especially where hogs and chickens are allowed to remedy the evil by eating the fallen fruit and the grubs. This evil must be overcome, or certainly we will be overcome by them.

The weather indicates early rains; atmosphere heavy; heavy dews at night.

Hop picking and drying is in progress. Although the crop is light, the quality is excellent.

Parties are out making arrangements to ship grapes from Florin direct East. Producers want \$40 per ton, or they will convert the grapes into raisins. Common varieties sell at \$10 per ton for wine. Sacramento county is always noted for good crops and excellent fruit.

The capital will soon be a center of attraction to "sight seers." The State Fair will soon offer its attractive scene, and lovers of good stock from all points will center here. Every attention is being given by the wide awake and energetic directors, throughout all departments, to excel all previous fairs in interest and profit to all.

At the closing of the Fair, the State Constitutional Convention will gather able and distinguished members from all parts of the State. It will be a session of intense interest for the good of the State, and one that may not occur again for many years to come.

During the convention, the assembling of the State Grange will also take place, collecting Master, Past-Master, Matrons and its fourth degree members, who feel an interest in the Grange, all to work for the "good of the Order."

"Down by the sea," or "off to the springs," or "hie to the mountains," has become the popular cry of Sacramentans. It is now the prevailing custom during the heat of summer months for those who can to resort to some attractive spot, throw off cares and "let themselves loose." For nearly two months the "up and be off" has had its course. Now they are winding their way back from all directions, strengthened, highly pleased and in good spirits to encounter business, intermixed with home influences and fireside enjoyment.

GEO. RICH.

Sacramento, Cal.

Fence Wire.

EDITORS PRESS:—The Grangers' Union of Stockton has recently added a new department to their already large business, viz.: the manufacture of the Scutt patent four-pointed steel, barbed fence wire. Mr. A. J. Robinson, formerly with the Joliet Wire Fence Company, Illinois, patentee of the improved machinery used in their factory, is Superintendent of this department, owning one-third interest. The power used in running the machinery is furnished by G. Lissenden's Pacific Agricultural Works. Four of the Scutt patent twistors are now in use and more will be added as needed. The twistor revolves rapidly, each driven by a belt running from a line shaft, while a spool set at right angles to the direction of its velocity, and worked by internal gear, winds the wire as fast as it is finished. Small pieces of steel one and one-half inches in length by three-fourths of an inch in width are cut with two prongs at each end and afterward punched into shape by a machine, giving the points opposite directions. Steel made by the Seaman & Martin process is used exclusively for making the barbs. The machine plait the wire instead of twisting it, which gives it greater strength than any kind we have before seen. The tension falls on both strands equally when tightened, and in this respect differs very materially from fence wire, in which one strand is simply twisted around the other. Being manufactured by machinery it is perfectly uniform throughout. None but steel wire is used in the manufacture. The spools of wire are of various weights varying from 40 pounds to 125 pounds per spool. As each spool

comes from the twister, it is dipped in a tub of chemically-prepared paint, weather-proof iron cement coating. The capacity of each twister is 600 pounds per day. The superiority of this wire consists in its great strength, in its durability, uniformity, handsome appearance, and 64 extra points on barbs per rod.

Fence wire is manufactured largely in the East and used extensively. The rates of the Joliet Wire Fence Company for the last year have been 20 carloads per month of 10 tons per car. Their freight bills for the month of July were \$1,020.04. This fence wire can be shipped to any part of the coast at very small expense as compared with ordinary bulky material used for fencing, and can be used to very good advantage by farmers in the southern part of the State and in the great valleys of the interior.

H. E. H.

The Mortgage Tax Question.

EDITORS PRESS:—Is it not a mistake to suppose, as some appear to do, that to tax solvent debts to the creditor will add to the amount of taxable property? As I understand the proposition, it is to exempt as much from the debtor's assessment as you add to the creditor's.

In the second place, will not the debtor be willing to pay a little higher rate of interest on the money he borrows, he being exempt from tax on an amount of property equal to the money he borrows? Certainly the creditor will ask a higher rate on the money he lends; therefore I cannot see that it will benefit the debtor.

Again, A owes B; B says "A's account is not solvent; he has no property that can be taken by law," so he does not give the account to be assessed. A says: "I owe so much," meaning the account of B. In such cases, B swearing in his assessment without A's account, and A swearing that he owes so much will be released from tax on property equal to his debts. It will require very careful assessing to avoid leaving out a large amount of property from the assessment roll. For instance, a country store keeper usually has a large lot of accounts against his customers. Some he knows to be good, some doubtful and others absolutely insoluble by law, which you will remember exempts certain properties from seizure for debt. These insoluble debts he will not be required to list to the Assessor; but the debtors will, one and all, claim to have property equal in value to the amount of his debts exempt from taxation. This loss will require a higher rate of interest on all other property.

Still again, the extra work required of the Assessor to assess under the proposed rule will require that he have more pay, thus necessitating a still higher rate of taxation, of which we are all tired enough already. I believe that the rule of our present Constitution, as defined by the Supreme Court on this question, to be the best that has been devised. VINDICATOR.

Sebastopol, Cal., August 23d.

TEMESCAL GRANGE meets for the first time in the new hall, Cameron Block, Fourteenth street, Oakland, on Saturday, September 7th, at 2 P. M. Important business is expected. The Worthy Master permits us to just hint to the sisters that "lunch baskets and things" will be in order. The brothers can draw their own conclusions and all Patrons consider themselves invited.

A Cure for Loose Tires.

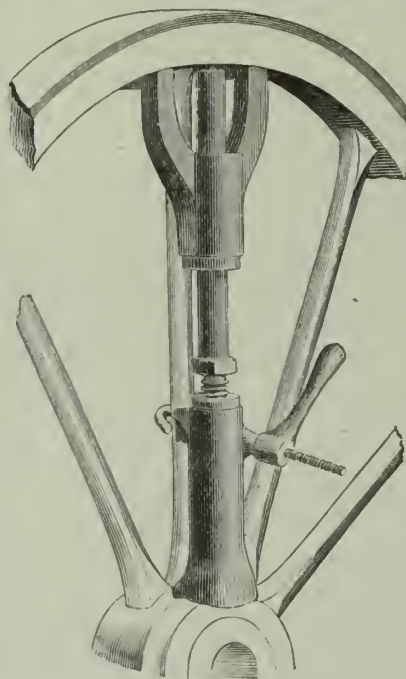
A device which will enable a teamster to tighten up his wheels without the labor and expense of a trip to the blacksmith shop, and a long delay while the tire is being "nset" and "shrunk," will often prove of great value. In this dry climate the difficulty from slacking of wheels is much greater than in more humid regions. We illustrate a cheap piece of mechanism on this page which is claimed to do its work most effectively, and not only to act as a speedy cure to the trouble of loose tires, but in its action upon the wheels by enabling the teamster to keep them always taut, makes them last much longer. The tire-setter is the invention of J. A. Miles, the patent being obtained through Dewey & Co.'s agency. It has been widely used during the last few months of busy teaming, and we have seen many testimonials of its satisfactory and valuable work.

The inventor gives the following description of the adaptations of his device: It is calculated that the running gears of a wagon will outlast two sets of wheels by the old method of cutting and resetting; as the tires are bolted on the wheels, the wagon is run a large portion of the time when it is too loose to run without injury to it. A wagon should never be run unless it is tight enough to keep the tire to its place without the aid of bolts. Therefore, any appliance for keeping the tire in its place, except for very light wheels, is wrong, as the moving of the tire on the felloe is a sure indication that it

should be tightened; and by having this implement at hand you can accomplish the object in a few minutes, which by the old plan would cause a delay of a couple of days, besides an expense that would more than half cover the cost of this machine.

Now, by the aid of this implement, and using it as occasion requires, you can make the wheels last as long as the other parts of the wagon; therefore, you double the lifetime of your wagon, besides saving all expenses of repairing wheels, which is the largest part of the cost of keeping a wagon in running order. There is also the advantage which this plan has over the old process, that after keeping your wheels in just the right condition during the dry season, the leathers can be taken out and that process called dishing is prevented, which ruins more wheels than all other causes combined. For very loose tires it will be necessary to wedge between the ends of one or two of the felloes. They are made to fit all sizes of wheels. It can also be made to answer the purpose of a cheese and wine press, also a jack-screw and wagon-jack, for which purpose it has been especially adapted in its construction.

The principle upon which the tire setter works is quite plainly seen from the engraving, and its mode of use is explained as follows: Place the setter on the hub on the outside of the wheel as it stands on the wagon, opposite the upright



MILES' IMPROVED TIRE SETTER.

spoke (as shown in the cut). Bring the clamp around the spoke and tighten the screw sufficient to hold the spoke from pulling out of the hub; then, with the wrench, raise the felloe from the shoulder of the spoke about an eighth of an inch. Take a piece of rather thin leather, cut a hole as large as the tenon on the spoke, slit it on one side, bring it around the tenon between the spoke and the felloe, loosen the screw and trim down to the size of the spoke. Take the next spoke and bring it to an upright position and serve in the same manner. Continue on until your tire is tight enough. To put in a spoke to replace one that has been broken out, fit your spoke and drive it into the hub; saw the tenon off about one-quarter of an inch in length, place the tiresetter on the hub and raise the felloe until the tenon will slip into place.

The inventor, Mr. J. A. Miles, may be addressed at corner of 26th and Folsom Sts., San Francisco. The setter is also for sale at different points throughout the State.

A COLONY ENTERPRISE IN MONTEREY COUNTY.—Our advertising columns this week contain the announcement of a new colony enterprise in a favoring region in Monterey county. The advertisement sets forth briefly the claims of the locality as a section for comfortable homes and bountiful productions. We can but advise all home seekers to send for the fuller statements which are given in a prospectus. Many excellent points are presented and the terms are such as to encourage purchasers with moderate means.

SINCE the year 1875 United States imports have fallen from \$519,000,000 to \$423,000,000, and exports have increased from \$499,000,000 to \$680,000,000.

AGRICULTURAL NOTES.

California.

AMADOR.

FRUIT DRYING.—Dispatch: The Alden fruit drier at Jackson is now being run to its full capacity, both day and night, upon an excellent quality of fruit; principally apples, peaches and plums. This rushing work will likely be kept up until the setting in of winter rains, after which time the drier cannot be successfully operated.

BUTTE.

THE FAIR.—EDITORS PRESS: The Upper Sacramento Valley Agricultural Society will hold its sixth annual fair at this place, commencing Sept. 30th and ending Oct. 5th, 1878. The Society's stock grounds are located in one of the finest groves on the Pacific coast, and affords ample room for all who may wish to exhibit stock or poultry. The tracts for the exhibition of stock are fine. This district comprises several wealthy counties, and this being the first fair that has been held for several years, it will afford a grand opportunity for our farmers to purchase improved stock, especially of sheep and swine of which we are much in need. The Pavilion is one of the largest in northern California.—A. H., Chico, Aug. 25.

COLUSA.

HEAVY TEAMING.—Sun, Aug. 31: The largest load of wheat ever brought to Colusa, was drawn in on Saturday the 17th inst., by W. R. Merrill's team, from his ranch, at the seven-mile house. The team consisted of eight mules weighing as follows: Leaders, 1,780; third team, 1,820; pointers, 2,090, and the wheelers, 2,070, making a total of 7,750 pounds for the eight animals. The load consisted of 185 sacks of wheat weighing 22,630 pounds. G. W. Cameron, the driver, tells us he could have pulled 50 sacks more without difficulty. What is the use of a freight train or railroad, when such teaming can be done? Give up the bells to Cameron.

EL DORADO.

FRUIT DRIER BURNED.—Republican, Aug. 29: On Friday afternoon the new drier at the Hulburd Canning and Drying Factory, Upper Placerville, was discovered to be on fire. The drier contained some five or six thousand feet of lumber, and was completely destroyed, and the whole inside of the building and most of the roof swept away. Luckily the fire was confined to this apartment, though considerable loss was sustained by removal and from drenching in other departments. The drier was filled with fruit, a number of tons, which was also a total loss. The entire loss is estimated at about \$2,000 which of course does not cover the loss on account of delay at this, the very busiest season of the year. The company at once cleared away the rubbish and commenced a new Hulburd drier in place of the one burned, which they expect to have completed within a week. This will be precisely like the one built by them two years ago, and which has proved a perfect success.

FRUIT DRYING BY COLD BLAST.—Placerville Democrat: An experiment was made at a foundry in Placerville last week, in fruit curing, by blast of cold air. In this experiment about a peck of sliced apples were placed in a sieve and subjected to a cold air blast for three and a half hours in the cupola furnace of the foundry, and the fruit is reported to have been completely and beautifully cured by the treatment, remaining soft and without the slightest discoloration. We were about to say dried, but cured is a better word, for there was none of that hard, harsh, stiff dryness about it which frequently results from drying by sun heat or fire heat. The experiment was a most gratifying success, and in our judgment is fraught with results of great importance to the growers and manipulators of fruit. The blast of cold air completely frees the fruit from its excess of moisture, with no possibility of burning or shriveling it. Compared with sun drying, it effects a great saving of time and labor. Compared with fire drying, it effects a great saving of expense, attention and risk. Anybody who can command or devise a strong blast of cold air, can dry fruit in a superior manner, without being dependent on the weather and waiting on the slow process of sun drying, and without the more expensive resort to fuel and the risk of overheating.

FRESNO.

FATAL USE OF BLUESTONE.—Republican, Aug. 31: One thousand eight hundred and ninety-nine sacks of wheat was a small yield for the nearly 1,800 acres of land sown, but Mr. Days' failure was no fault of the season or the soil. He soaked his seed in bluestone water as was his custom further north, and sowed it wet in dry, hot soil. The sprout was killed and the crop failed in consequence. Mr. Days has raised wheat here on the plains for five successive seasons, not always profitably; but his faith in the value of our plains for grain culture has become stronger with experience.

SHEARING.—Shearing will begin in Fresno on September 20th, as will be seen by Mr. Dusy's announcement. He intends to employ white men, and as his facilities for shearing are good, he will undoubtedly do a large business and make things lively for several weeks. The fall wool clip will be of good quality, but not as large as might reasonably have been expected. There are fewer sheep in the county than at

this time last year. The losses last winter were considerable, the spring increase small, and the sale of lambs for slaughter comparatively large. Probably between 500,000 and 600,000 sheep will be sheared in the county, the yield from which should bring a return of not less than \$400,000. There is an abundance of feed, and the outlook for sheep owners is favorable. LOS ANGELES.

A BORER IN ORANGE LIMES.—*Herald*: Dr. J. G. Bailey, of Santa Ana, showed us the top of a young orange tree, taken from the place of Mr. John Low, near that town, which were perforated in a great number of places by a small black beetle. The whole upper portion of the tree was hollowed out by these insects, which had bored into it at the eye-holes and then worked their way up the heart of each limb, coming out of other apertures at the top. The passages are grooved out round and smooth, and are about the circumference of an ordinary lead pencil. The bugs are about one-third of an inch in length, broad built, and armed with a solid head-piece which has a sort of swivel attachment to the body. But one tree has thus far been found perforated by these bugs, and from that some thirty of them have been taken. The discovery has spread great alarm among the people of Santa Ana, as they fear this is but the beginning of a new and sweeping invasion of their young orange groves. The tree in question was cut off just below the lowest perforation, all above that being dead; but the body of the tree is still alive.

COLT SALE.—Mr. L. J. Rose has sold three of his blooded colts, one a yearling by "Inca," and two two-year-olds by the "Moor," the price realized being \$1,500. Mr. A. Newlands was the purchaser.

MARIN.

KILLED BY OXEN.—*Journal*, Aug. 29: Pablo Figueras, of Olema, was killed by an ox last Monday. He had stepped in between the wheel oxen, probably to attach them to the tongue, when the lead yoke veered around, and he was crushed between the ox and pole so severely that he died soon after. The deceased was an educated man, speaking and writing several languages, and held the office of Justice of the Peace in this county for several years.

NAPA.

FLOWING WELL ON THE MARSH.—*Register*, Aug. 31: William Appleby some time ago commenced the work of reclaiming some marsh land, near Huichica creek, and desiring to find out if a good supply of pure water could be obtained, sank a well to the depth of 300 feet, about one mile from dry land. The water is now flowing from the well through a six-inch pipe which rises about 18 inches from the ground. Mr. T. J. Dewoody, who gives the above information, pronounces the water a first-class article of drinking, being pure, fresh and sparkling.

GRAPES.—Wine grapes are beginning to arrive in small quantities at Van Bever's "Uncle Sam" wine cellar, in this city, where crushing will be commenced probably to-morrow. It will be two weeks yet, however, before wine making will begin in earnest.

SAN DIEGO.

THE PACIFIC RURAL ORANGE.—*Union*: Mr. Geo. C. Swan, of Paradise valley, National ranch, brought us yesterday some rare specimens of fruit from his place. These included the "Pacific Rural" orange, Mr. Swan's specialty in that fruit; a large orange, a seedling, only five years old, orange from Acapulco seedling planted by Mr. Hubbell six or seven years ago; and exceedingly choice Sicily lemons. The "Pacific Rural" is a small, thin-skinned, deep-colored, juicy, sweet and high-flavored orange. Specimens were sent some months ago to the editor of the PACIFIC RURAL PRESS, in San Francisco, who was requested by Mr. Swan to compare it with the best orange he could find in that market, and if in the qualities enumerated he found the San Diego orange to excel, he was desired to name it after his paper. The editor responded by giving the fruit the name it bears, finding it to fully sustain Mr. Swan's claims for it. The fact that oranges are gathered at this extremely late date, past the middle of August, is itself worthy of note. The season, as is well known, for gathering the fruit, is in the winter and early spring. But in San Diego we shall still be gathering oranges in the early fall.

THE COFFEE TREE.—Hitherto few people would concede that the coffee tree could be grown in San Diego county, and scarcely any one would admit that it would attain any state of perfection in bearing fruit, claiming that it required a warmer climate. This, like many other incorrect impressions has been entertained by those who have not experimented, and simply come to conclusions for want of proof to the contrary. The fact has been proved now, and the trees can be seen in bloom in the garden of Mr. R. R. Morrison in this city, showing as thrifty a growth, and requiring as little care as the orange, lemon, olive, or the fig which stand in the same garden. This is the first experiment, and a success, and it would be well for our citizens to try other classes of trees that are now considered only suited to the tropics, when, perhaps, several varieties will be found well suited to this climate and soil. Mr. Morrison has been experimenting for over three years on tropical trees, procuring the seed from central Mexico, and has other kinds flourishing, and to all appearances thoroughly acclimated, one of which is the Anon or custard apple. Both these trees are evergreen and have beautiful foliage,

the coffee tree leaves always appearing as though varnished, and being much finer than those of the India-rubber tree.

SAN JOAQUIN.

DEATH OF A VALUABLE ANIMAL.—*Independent*: The full-blooded Durham bull, "Twenty-sixth Grand Turk," owned by W. L. Overhiser, died at his ranch Friday night. This was one of the finest bulls in the State, four years old, weighed eighteen hundred pounds, and was valued at \$1,000. The cause of his death is a mystery, as he was apparently well on Friday night, and found dead in his stall Saturday morning. Dr. C. Grattan, also lately met with a misfortune, in the loss of his Jersey bull, "Damon," a handsome four-year old that was valued at \$1,000. The doctor had had the animal but ten months, having purchased him of J. B. Haggin, by whom the bull's sire and dam were imported from the Isle of Jersey. Dr. R. K. Reid also lost a valuable Black Hawk mare the other day, that was gored to death by a vicious bull on the ranch.

A GOOD CROP.—Mrs. M. W. Rhodes, of Charleston, widely known and recognized as a most successful farmer, albeit she is past the three score and ten allotment of life, sent her crop to market on Monday, and, contrary to her usual practice, sold it without storing. It amounted to about 3,600 bushels, for which she received a dollar a bushel. May she live to reap a score or two of crops from her productive and valuable farm.

SHEEP SHEARING CONTEST.—*Stockton Herald*: A sheep shearing match will be held at French Camp September 7th, between George Cruthers and Thomas King, for a purse of between \$500 and \$5,000. The contest will be to see which one of these two sheep shearers can shear 100 sheep in the shortest time.

BOULDIN ISLAND.—*Independent*: Bouldin island, one of the northernmost of the islands of this county, is being cultivated this year for the first time since its second reclamation. It was reclaimed in a very unsubstantial way five or six years ago, but the levees were too weak to withstand any pressure and gave way after the first year, when the island lapsed back into its original condition. It has since fallen into the hands of men who do work more thoroughly, and last year built up the levees again. By dint of hard work during the flood time last winter this island was saved from overflow when all the neighboring islands were submerged. They have been troubled with seepage to some extent during the early spring months, and as a consequence the crops have been put in late. The company have 2,000 acres planted to potatoes, which are thriving finely. The other 4,000 acres of the island will probably not be cropped this year. From a single acre of Early Rose potatoes, the product of which was sent to market quite early, there was realized about \$100, which illustrates the productiveness of these lower lands when reclaimed. The levees of Bouldin island are of peat, and while new, and before the island dries out, hold well, although constantly sinking. A force of Chinamen will be put on next week to add two feet to the height of the levee all around and increase the width the same amount. The wharf at the landing is one of the best on the San Joaquin river. It is just above the mouth of the Mokelumne and nearly opposite Webbs landing, Contra Costa county.

SAN MATEO.

SQUIRREL KILLING.—*Times and Gazette*: It was stated in these columns two weeks ago that the Board of Supervisors had not formed squirrel districts and appointed inspectors, as it was thought they would do, and that, from questions of economy, they might not do so, although the matter had not been definitely settled. There seems now to be a probability that arrangements will soon be made by the Board for carrying out the law, that districts will be formed and inspectors appointed. There is now in the squirrel fund the sum of about \$2,400. This will go far towards furnishing the expense required for one season's work. But little, if any additional money will need to be raised this year, to enable the officers to make a very effective raid upon the common enemy.

SONOMA.

PLUMS ON ALMOND STOCKS.—*Flag*, Aug. 20: Last Fall we asked if plums could be grafted on almond stocks, and received no reply. We are now enabled to say that they will, as Andrew Bouton of the Heart's Desire Nursery has fully demonstrated. He so grafted the "General Haud Plum," and now has a shoot 10 feet long.

Nevada.

CALIFORNIA DAIRYMEN ON THE MOUNTAINS.—*Cor. Record-Union*: In Sardine valley we took lunch with dairyman Fleckenstine, from Folsom. This valley is like hundreds of others on the eastern slope, of a size sufficient to support one good dairy of say from 80 to 120 cows, surrounded on all sides by high mountains covered with fir and yellow pine timber. The sugar pine is almost entirely wanting east of the Summit. Through the ranch runs a good stream of water which is hardly ever dry. The occupants come here in June and drive back to the valley in October. Their summer is a busy one. They begin to milk at 4 A. M., and again in the evening at six. They churn every other day in enormous boxes hung in frames, and turned over and over by a crank. Butter is packed in kegs made of white fir, which neither impart taste nor smell to their contents. It is the experience of all whom I have spoken to that the yield of butter is 50% below the average this summer, probably owing to the heat, which has dried up the grass. The quality is fully up to the standard.

News in Brief.

New silver discoveries are reported at silver Inlet.

A Chinese envoy is about to be despatched to Russia.

A chamber of commerce has been established in Tokio.

SWARMS of crickets are reported in San Buena Ventura.

San Francisco gave about \$2,000 for the yellow fever sufferers.

MONTANA grain prospects are good, grass-hoppers notwithstanding.

AUG. 29th 96 bankruptcy petitions were filed in Chicago; Aug 30th, 165 more.

AUG. 28th, 50 petitions in bankruptcy were filed in New York and Brooklyn.

SOMEONE is manufacturing bogus Mexican dollars in Lead City, Black Hills.

THE wool crop of Douglas county, Oregon, this year is put at 1,500,000 pounds.

CARELESSNESS among horsemen is allowing glanders to spread in San Francisco.

GERMANS are coming to America to examine our system of manufactured tobacco.

THE Japanese government has checked the attempt to secure emigrants for Peru.

IN Chicago, August 27th, there were fifty-two petitions in bankruptcy, mostly small.

THE National Agricultural Congress began its annual session at New Haven, Aug. 27th.

A MEETING of citizens at Yuba City has been called to form an anti-debris organization.

AT the State Fair, which opens September 16th, \$50,000 in premiums will be distributed.

THROUGH regular sources Chicago had to Aug. 30th, received for the yellow fever fund, \$20,902.

THE Imperial Bank of Germany has raised its rate of discount to 5%, and for short loans to 6%.

PROSPECTORS in Como district are making sure their titles to claims. They still have confidence.

UP to August 27th, San Diego has shipped this season 318 barrels, 5,607 cases of honey to San Francisco.

THE Reed quicksilver mine, Yolo county, has closed. Seventy or eighty men are thrown out of employment.

T. G. BILLY of Greenwood, El Dorado county, recently sold a gravel mine to some Eastern capitalists for \$50,000.

THE iron-masters of West Scotland have agreed to notify their employes of a reduction of 10% in their wages.

EASTERN capitalists have invested about \$30,000 in old Oregon mining claims, and will take up some new ones besides.

W. W. CORCORAN, of Washington, has given the University of Virginia \$50,000 to endow a new Chair of Natural History.

THE Treasury has issued a call for redemption of \$5,000,000 of 5-20 bonds of 1865, \$2,500,000, coupon, \$2,500,000, registered.

THE machinery, except the hoisting works for the new works of the Ontario mine, is to be made by a Virginia City foundry.

ON Aug. 28th the *Great Republic* carried over the Columbia river bar the largest and most valuable cargo ever shipped from Oregon.

AUGUST 31st the Anti-debris association subscribed \$170,000, assessable to an extent not exceeding 3% for the purposes of the society.

VICTOR RESSAYRE has located the Favorite claim—600 feet east of Ophir, Mexican and Union Con., and north of the North California.

BULGARIANS maltreated Jews and Turks. Russians interfered. Consequence, a fight in which Russians and Bosnians were killed.

Reform!

A black walnut imbedded in a rock taken from the Black Star coal mine fifty-two feet below the surface is on exhibition at the bank of Anaheim.

THE Tokio *Times* has advocated a commercial alliance with the United States which shall free the trade between the two countries from tariff charges.

THE European delegates to the Monetary Congress thank the United States for bringing about a change of opinion on important monetary questions.

AUG. 27th, Jack O'Hara and three others attempted to jump the Black Hawk ground at Bodie. They were fired upon, and O'Hara was mortally wounded.

THE effort of a Philadelphia coal company to introduce their anthracite into the non-coal producing countries of southern Europe, promises to meet with success.

EDISON has received the government prize for inventions at the Paris Exposition. The quadruplex telegraph, carbon telephone, phonograph and electric pen carried it.

ON August 28th, a paper by Prof. Hilgard of the University of California, on the relations of science to agriculture, was read before the National Agricultural Congress.

COLONEL HOGG, of Oregon, has just returned from Europe, thinks that the Indian troubles and the cry of glutted labor market, will probably render immigration small the coming year.

THE S. F. Copper M. Co. at Spenceville, Nevada county, is now shipping 30 tons of pure copper per month, and during the coming fall will increase their shipments to 50 tons per month.

CATTLE in large numbers are dying of murrain in Tulare and Fresno counties. Large numbers are also dying in Fresno of a disease not heretofore met with in this country.

THE hair rises up on the back, becomes greasy in appearance, the animal ceases to eat, and dies in a few days.

THE fishing season on the Columbia has been ordinarily successful.

THE President has appointed Mr. Henry Dithmar, Consul to Breslau, Prussia.

THE Bank Commissioners report the Clay St. Bank of San Francisco in a healthy condition.

THE first Japanese domestic loan has, foreign predictions notwithstanding, proved a success.

ENGINEERS are considering the proposed branch road of the Virginia and Truckee to Bodie.

AN influential party in the Indian office is said to favor the annexation of Afghanistan to England.

THE Thomas grant, in Tehama county, has been sold to Fennell & Sons of Colusa county, for \$432,000.

IT is said that the well-known Hite mine of Mariposa has been sold to New York parties for \$1,000,000.

THE French harvest: very good, two departments; good, twelve; fair, twenty-three; poor, forty-six; bad, seven.

RUSSIA has, near the Caspian Sea, an oil well that sends out 10,000 gallons a day, in a solid stream seventy-five feet high.

THE condition of the oat crop, as shown by August returns to the Agricultural Department, is represented by 100; average of July, 101.

RICH diggings have been discovered in "Horsefly" county, Cariboo. Chinese miners are making from \$40 to \$86 to the hand, daily.

HARDEE, Florida's scientist, advances the theory that yellow fever can be destroyed by atmospheric concussion, caused by explosion of gunpowder.

THE clearances at the San Francisco Clearance House for the week ending August 31st, amounted to \$19,466,018, against \$17,120,760 the previous week, and \$11,856,100 for the corresponding week in 1877.

California Wines at the Mechanics' Fair.

Professor Hilgard, Agricultural Professor in the State University, Doctors Bertody, Behr and Hammond, B. B. Redding, Esq., Adolph Herbst, Esq., and Rev. Dr. Bleasdale, of Melbourne, Australia, have been appointed by the Managers of the Mechanics' Fair, a Board of Experts to examine and report upon the California wines sent for that purpose to the present Fair. It is understood that this is not intended to be a competitive examination, but one made with a view to determine, as far as they are able, the present condition of wines and wine-making in this State. The samples already sent in, or promised to arrive in a day or two, show fairly the districts in which they were grown, and the methods of their preparation. Still, a greater variety, both in kind and age, is most desirable for the basis of a comprehensive report. Circulars were sent some weeks back, to most of the large growers and wine-merchants, but many of them have made no response hitherto. It would be a pity, if, through indifference or neglect of the growers and merchants, the judges should be obliged to purchase from the stores bottles bearing the labels of well-known vineyards and merchants, in order to render their labors complete, and their report comprehensive, as such samples might prejudice rather than benefit the wine industry, not alone in California, but in foreign markets. Dr. Bleasdale's reports, issued from time to time, upon large and very varied collections of Australian wines sent the Inter-Colonial Exhibitions, have been extensively circulated both in the Colonies and Great Britain, and accepted as being critically accurate and reliable, and generally containing useful information about the details of manipulation. Whilst there are to be found several kinds of excellent native wine, it is yet true to say that there is plenty of room still left for improvement, both in the selection of grapes and the methods of manipulation.—*Alta*.

METEOROLOGICAL SUMMARY FOR AUGUST.—The report of the U. S. Signal Service officer, of San Francisco, for the month of August is summarized as follows: The mean height of barometer for the month was 29.90; mean temperature, 58.2; mean humidity, 79.4; prevailing winds, southwest; highest barometer, 30.108; lowest, 29.732; highest temperature, 73°; lowest, 32°; monthly range, 21°; greatest velocity of wind 32 miles per hour; total number of miles traveled by wind, 8,780; total rainfall, .00 inches. Rainfall in August during former years: 1871, .02 inches; 1872, .00 inches; 1873, .08 inches; 1874, .00 inches; 1875, .00 inches; 1876, .01 inches; 1877, .00 inches.

A SPLENDID NURSERY.—Messrs. Ellwanger & Barry, whose advertisement appears in another column, have a great reputation throughout the country for their large assortment of the choicest selection of trees, plants, or bulbs. Without exception their establishment at Rochester, N. Y., is the largest and most reliable in the United States. Parties desiring to lay out their grounds should send for a collection of their catalogues, and select what they wish. They are full of descriptive cuts, and are an ornament as well as very instructive.—*Spirit of the Times*.

NATURAL SCIENCE IN EDUCATION.—The motion of Sir John Lubbock, providing for the addition of elementary science to the subjects for which grants are made under the English education code, has been defeated. Dr. Lyon Playfair, who supported it, said they only wanted to give children the opportunity, at present denied them, of gaining elementary knowledge of common things.



Not Lost.

[Written for the RURAL PRESS by M. E. L.]

The leaflets by breezes are riven,
The acorn is loosed from its place;
Hurled down by the four winds of Heaven,
It idly drifts off into space.
Is it lost?

We can never recall in December
All the flowerets which blossomed in May;
On the morrow we never remember
All the words we have uttered to-day.
Are they lost?

Nay, an oak grows, of marvelous beauty,
By the dusty wayside, full of grace;
Thus the four winds were true to their duty,
And the seed which they bore into space
Was not lost.

There's a story we sometimes shall read,
Made from echoes of voices below;
For his messengers ever give heed,
And our words as they thoughtlessly flow,
Are not lost.

Hollister, August 20th, 1878.

Childrens' Rights.

[Written for the PRESS by MRS. C. I. H. NICHOLS.]

In the RURAL of March 30th, under head of "Childrens' Rights," brother Berwick, after disclaiming "Women's Rights so-called," says: "Children's Rights, it seems to me, are more in need of champions now, than women's rights. Every child has a right to a loving mother, who will consider it one of her highest pleasures to tend and train her child. I leave it to the advocates of women's rights to point out what more noble and excellent occupation they propose in place of this Godsend." Evidently brother B. is confounding natural rights with legal rights, and is not aware that in advocating the natural right of every child to its mother, he is siding with the advocates of women's rights against laws that abrogate that right, and defeat hosts of loving mothers in their efforts to properly tend and train their children.

Under our State laws, with the exception of a few States, in which father love has joined with mother love in its "fight" for children's rights, the right of a child to its mother is a myth, so long as she is a wife—a wife having no legal control of her child, and her child no legal claim on her for either care or support.

The legal control and custody of children born in wedlock, is secured to the father as against the mother. In case of the fathers death—if he has not by will, assigned the care of his child to some other person—the widowed mother may, by fleeing probate officials and giving bonds for the faithful discharge of her duties, be appointed its legal guardian. But let this widow marry, and she finds that marriage has extinguished her guardianship, finds to her dismay, that it has extinguished all legal claim of her fatherless child on her for either care or support. Her children have, in fact, become wards of the State, for whom county and town officials are empowered to hunt guardians—the mother's approval of the person or persons provided, not being required.

The youth of fourteen, restive under the wholesome control of a loving mother, may appeal to the prescribed legal authorities and have some genial gentleman, whose creed is generous in the "temperate use of all God's creatures, brain-burning liquor" included, appointed in her stead,—the law allowing fatherless children of that age to choose or change their guardians. Alas, I have known more than one boy—notably well-behaved and fond of his mother—influenced by reckless, injudicious or interested parties, escape in this way from the control of a devoted mother, only to enter on a career ending in a drunkard's grave or a felon's cell.

Perhaps brother B. will accept a bit of personal experience in illustration of the antagonism between childrens' natural rights and men's legal rights as seen from a mother's standpoint of no rights.

In 1850, in examining the Vermont Statutes on Guardianship, with reference to a business contract, which I was called upon to execute in the interest of a son, a minor, I found it "provided," that in case she marries, a woman's guardianship "expires."

I applied to a friend, an ex-Probate judge, for the reason of this extinguishment of the mother's right to care for and protect the interests of her child, of the child's right to the protecting care of his mother?

With an expression of genuine chagrin, that he must explain what he felt for the first time perhaps, was an outrage on loving, intelligent womanhood, my friend replied: "A wife cannot give the bonds required of a guardian." And why cannot she give bonds? "Because," rejoined my friend, "by the law of marriage, the legal existence of the wife is merged in that of her husband. She cannot make a contract; she cannot bring or defend a suit in the courts;

consequently could not protect her own or her children's personal or pecuniary interests. When a woman marries, she becomes legally incompetent to perform any business act, or to be a party in any business transaction involving personal or pecuniary responsibility."

But my dear sir, in your answer, you only amplify the fact of the legal extinguishment of the wife's right to discharge the responsibilities of a mother. What I ask to be informed of, is, the legal excuse, for there can be no just reason for holding the married woman incompetent to perform duties for which she is held both competent and responsible as a single woman? My friend replied, "the reason is this: To hold a married woman responsible for the care or support of her fatherless children, would conflict with the legal right of the husband to the personal services of the wife, and involve him in the responsibilities pecuniary and otherwise of her guardianship acts."

But, sir, suppose that, holding property in her own right, she can secure bonds; or that her husband declines to regard her as a menial owing him service, and holds, as my husband does, that the natural claim of the child upon the mother cannot be cancelled by any acquired claim of the husband, and signifies his readiness to accept every responsibility incurred by his wife in the performance of her duties as guardian?

"The law," my friend rejoined, "is conclusive in its denial. There is no provision by which, should the husband himself offer to be her bondsman, the wife could legally act as guardian. The irresponsibility of the wife is a principle so interwoven in practical legislation, that to expunge it would destroy the harmony of the statutes."

The harmony of injustice! The mournful discord, rather, of natural affections crushed—natural laws violated! If I had not before stumbled on reasons sufficient for the advocacy of rights for women, here was abundant reason for feeling that "a voice in the State palaver," as Brother B. contemptuously designated the right of suffrage which has been used to ignore the natural rights of mother and child to each other, would be to loving mothers a precious boon for the recovery of this Godsend.

In 1861, I was one of three women employed by a committee of eminent women of Ohio to canvass that State, lecturing and collecting signatures to petitions to its Legislature for equal and political rights for women. On one occasion, in a village where I had gained a most gratifying accession of names to my petition, my attention was directed to a bright boy of eight years, whose mother had recently died, possessed in her own right of a valuable farm inherited subsequent to her last marriage. By Ohio law, her husband, stepfather to the boy, controlled her estate during her life and at her decease became entitled to its use during his life as "tenant in courtesy." The stepfather, a man some 35 years of age, sold his "life-interest" in the estate at his wife's death, and left the country—and the boy unprotected for! The child had no relatives; but a friend of his parents took him in with his own children and saved him from the poor house. If he outlives his young stepfather, the boy will come into possession of his mother's estate. The law, to enrich the man, paupered the helpless boy!

Every mother who reads this will feel in her own heart the reflected agony of that mother, who, with an ample property, could not protect her only child against the legal robbery that left him an orphan without the necessities of life! For all that the world knew, this man had been kind as a husband, and kind to the child; perhaps, as she could do no otherwise, the mother trusted to his continued kindness.

Surely, Brother B. is right. "Children's rights are in need of champions." The fathers and bachelors have failed; who but the mothers and single sisters are left to come to the rescue? Echo answers "to the rescue!" Good men are coming.

In 1860 I was arrested with several of my neighbors, among them a Congregational clergyman and his wife, a deacon and wife, a Notary Public and an ex-Probate judge, for kidnapping neighbor D.'s children. As a matter of fact, we had aided the mother in recovering her little ones from the clutch of a husband who had lived for years on the earnings of her needle, beaten her once to death's door, finally choked her to insensibility and thrust her out of doors, throwing her clothes after her. Compelled at last to apply for a divorce as the only hope of getting her little ones and the control of her earnings—which under Vermont laws he could collect—to make a home for them, she went into a cotton manufactory in Maine to earn means. Just before the case came to trial he sold her furniture, came to Kansas, changed his name, and had been living two years in our midst, when the mother, having laid by \$400 in gold, followed and found her children being fed and clothed by the neighbors and living in a hovel with their educated and temperate, but most desperately vile father. He at once gave notice that if she resorted to the courts he would take the children out of the State. As the mother was stopping with me he applied for a writ, which under Vermont laws he could have obtained, to arrest me for "harboring the wife" he had turned out of doors, calling for damages in loss of the personal services she owed him!

In a private council of friends, the gentlemen, including Rev. Mr. —, advised that Mrs. N. and half a dozen other women go with the mother and take the children, and they would go with and protect us against violence. Mrs.

N. declined to run the gauntlet of the penitentiary for the righting of one such legal wrong among thousands.

"Where there's a will there's a way" was true in this case, as I will tell the Circle when fruit curing is finished.

The Wastes of Parasites.

In his lecture on the "Wastes and Burdens of Society," recently delivered in this city by Rev. Henry Ward Beecher, the following paragraph occurred. The next waste that I shall mention is the waste which comes from parasites. I understand the parasite to be an animal which was organized to get its living without working for it. There is a great abundance of them throughout nature. Men have their parasites, and communities have whole hordes of them, for I hold that, setting aside those who are reduced by misfortune, all the men in a community that live without returning an equivalent to society for their livelihood are parasites—every man that lives on other people's industry, on other people's economy, on other people's productiveness, is a parasite. He sucks for a living; he don't work for it. The whole criminal classes are simply parasites; they produce nothing and consume a great deal. The whole class of vicious men, as they are scattered broadcast over the whole community, are parasites. They do not add to the public wealth; they draw it out, and live without gaining a living. The whole multitudinous mass of lazy men are parasites. They earn nothing, produce nothing, use up a good deal, and they are, from top to bottom of society, all criminals, and all vicious men, and all lazy men—parasites on society. It ought to make society ashamed to see what vast hordes there are permitted to nibble, and suck, and consume, but do nothing for a living. I hold it to be a duty to comb out the parasites, and to free the community from the waste and destruction which they make without any restoration or equivalent return. Among the parasites enumerated by Mr. Beecher were the gambling-house keeper, the keeper of lust houses and the saloon keeper, and as a preacher of the gospel—his business, as people will say to him—he held it to be his duty, in addition to his duty as a citizen, to protest against the abuses thus fastened upon society.

THE VALUE OF DISINTERESTED VIRTUE.—Life is short, and you have much work to do. Work for others as well as yourself. You will not pretend you are never selfish. You are more or less so every day of your existence. In the very face of conviction you play the part of contracted littleness. How often do you forget the interests of others, in eager desires for yourself; and how readily you silence the whispers of reason by calling in for precedents respectable example. Yet you know the value of disinterested virtue, and how that avarice, or any other selfish passion, can never secure your felicity; but the appearances of the moment persuade you otherwise, and hence the cause of error and crime. Study, therefore, not only to be convinced of truth, but to establish it firmly in your mind, beyond the reach of doubt. Then, not till then, your character will be uniform, and your principle strong enough to carry you through the trials and temptations of life. No one can be happy long unless he is governed by virtue; and to be regulated by this sublime principle, he must early learn to make any sacrifice, even life, and all that renders it sweet in the eyes of mankind.

A DOMESTIC EXPLOSION.—The Shasta Record says: One of our neighbors, who has the reputation of making good bread, is "out of luck" this week. She made her bread as usual, and left it in the oven to raise, but it didn't get up worth a cent; so getting out of patience she placed it in the hot oven and closed the doors, and then lay down to await developments—and things developed with a vengeance. She was startled from her sleep with the idea that a band of Bannocks were in the house, and that each one had discharged a young canon at her. She soon, however, found the real cause of the trouble, or rather what was left of it. The stove was still there—in pieces. The bread-pan had lost its bottom, and hot coals and dough were scattered everywhere. The cat got some of the latter on her paws, and to add to the poor woman's troubles, she had a wild cat in the house for a time. She has since privately informed us that she does not think this life's path is all strewn with roses.

"As I was going over the bridge the other day," said a native of Erin, "I met Pat Hewins." "Hewins," says I, "how are you?" "Pretty well, thank you, Donnelly," says he. "Donnelly?" says I, "that's not my name." "Faith, then, no more is mine Hewins." So with that we looked at each other agin, an' sure enough it was naythir of us."

THE "lightning calculator" is superseded. An Oroville Grey has concluded the calculations and holed the lightning. Now, if some one will pour a thimbleful of squirrel poison in the hole and stop it up, that will end the career of Jove's thunderbolts in this State.

AT ONE of the stands where they dispense liquid comforts at times, in the Pavilion, the young man in charge informed a disappointed inquirer that he could obtain the desired article as soon as all the "ingredients" arrived. Those ingredients are what we want.

Wedding Extravagances.

The following sensible observations on the wastefulness which often takes place on marriage occasions, are from the pen of Camilla Crosland:

"How many people there are who in fine clothes and with smiling faces 'assist' at a modern wedding, yet in their heart of hearts think the profuse outlay and the general festive arrangements usual on the occasion a piece of tiresome folly! Few, however, like to make a dead set against time-honored customs, unless strong personal feelings or personal interests are concerned.

"It is desirable that when two young people, suitable in age, character, station, are warmly attached, they should be married as soon as prudence permits. Let us take, for instance, the case of an accomplished, but portionless young lady, the eldest of several daughters, who has been accustomed to utilize her talents in the home circle. She has been engaged, say four years, to a gentleman in a government office with a slowly rising salary. He is about thirty, she five or six and twenty. He has saved enough money to furnish a pretty little suburban dwelling, and she will be provided by her father with a modest *trousseau*, and they think it high time to "settle." Their income, even including a fatherly allowance for pin-money, will be considerably less than five hundred pounds per annum, and they being good arithmeticians, know they must live quietly, visit and entertain only in a homely, friendly manner, and neither go to or give formal parties. Of what use is the costly, white silk bridal dress, which in all human probability, will never in its original state be worn again? It will, of course, be laid up carefully, and looked at occasionally with tender sentimental interest; but by-and-by, in a year or two, it will seem old-fashioned, and most probably be picked to pieces and dyed some servicable color. Then there were probably at least four bride's maids, each to be presented with a jewelled *souvenir* by the not too affluent bride-groom, and the costly wedding-breakfast to be provided by the father. One mischief of the thing being that the whole arrangement becomes a precedent, so that the next sister who marries would seem slighted if she were to have a less stylish wedding.

"Perhaps the costly entertainment—which is often a great trial to the feelings of the parties most chiefly concerned—can only be given by dipping into a very slender capital, or by relinquishing the autumn seaside holiday. The worst of the matter is that the class a little below the one I have attempted to describe, imitates the bad example in its own way and to its own detriment."

Mrs. Crosland, in conclusion, mentions a case in which persons of respectable standing consulted economy and common sense in their marriage arrangements. "Due arrangements having been quietly made, the young lady one morning, dressed in ordinary attire, escorted by her father to 'give her away,' and accompanied by a younger sister to serve as bride's maid, walked to the parish church, where the expectant bride-groom was ready to receive them. There the ceremony was performed, the little party retracing to partake of the family luncheon before the wedded pair started on their tour. Was not this an example worthy under many circumstances to be followed?

[The only amendment which we would make to the above would be to do away with the "tour," or else cut it very short.—EDS. PRESS.]

THE STUDY OF LIGHT.—In closing an elementary treatise on light, the author, Prof. Mayer, writes thus beautifully of his theme: "We have seen how light moves through air, water and other transparent substances; we have learned something of the manner in which it may be reflected and refracted; and we have examined a few of the more simple facts about colors. Yet we have not by any means learned all that is known about light, nor have we exhausted half the capabilities of our apparatus. We have studied reflection from plane surfaces; all the wonderful effects produced by reflection from curved mirrors remain for further study. We have examined only one or two of the different kinds of lenses; and in the beautiful science of colors we have, as it were, only opened the gate into a strange and marvelous country. You may go on for a year and make experiments every day, and even then not reach the end. You have seen that it is not difficult to make experiments; and, should you take up other books on light and make new experiments, you would find much that would be of the greatest value and interest. Should you learn nothing else, you will see for yourself with what skill, wisdom and goodness, all those beneficent laws have been arranged. These things came not by chance, or of themselves. They all point to a great and wise Creator, who has given the light a pathway, and filled it with bewildering and perpetual beauty. It is the light that paints the flowers, tints the clouds and decks the sky in blue. Everything selects its own particular color out of the solar spectrum, and shines with all the beauty and glory of the light. No man hath counted all the glories of light, nor hath any man yet traced all its paths. It brings us strange messages from distant suns; it makes all nature beautiful."

To the American boy there is an awful, a majestic difference in the weight between the butt-end of a fish-pole and a hoe-handle.

Chaff.

T. H. E. TRAMP proposes to visit the Pavilion next week.

Job had miserable comforters, and suffered consequently from cold feet.

PRINTERS rarely get rich, for the reason that the dollar mark don't head the sense column.

If necessity is the mother of invention, who is the father? Poverty, of course.

At the sea-shore ladies' dresses are worn at ebb-tide. Too hot for high-tied wear.

IN Spanish liberty is "libertad." Think, said Spikes, of raising libertad-poles!

The demand for standard silver dollars increases in the East. They want them for cart-wheels.

THERMOMETERS in the East are now to be built with governors attached, to regulate the pressure.

THE New York Central has a female draw-poker player. Drummers have no chance against her poker.

VOLCANOES are never more than five miles deep, nor any higher. We feel more certain of the last statement.

THE Chicago Journal, having been spying around, observes that "the Potter Committee has sneaked into a recess."

CHURNING goat's milk beats Sampson's riddle—"out of the eater came forth meat"—for out of the butter came forth butter.

A DON Quixote has turned up in Massachusetts in the shape of a bug with a lance, and he is after the Colorado beetle.

AS THEY passed a gentleman whose optics were terribly on the bias, little Dot murmured: "Ma, he's got one eye that don't go."

THE latest fish story is of a little girl who drives two pike to her boat tandem. Tell that to pikers, we don't swallow such fish whole.

The new game law has made all our hunters so short sighted that they can't tell a buck from a doe—until it's too far to shoot at a second time.

"Etc." when used in the seuse of refreshment, means buttermilk. As for instance, "John got sick eating oysters and drinking wine, etc."

"ARE you the mate of this ship?" said a newly-arrived passenger to the cook. "No, sir. I am the man that cooks the mate," said the Hibernian.

THE latest coon hunt was made by a Missouri sow, who brought in three young coons with her pigs. Transmigration had certainly affected her family.

THE August St. Nicholas has short papers on "Digging Wasps," and "How to Travel." Let a small boy dig a wasp's nest determinedly and he will soon learn how to travel.

A CONNECTICUT whiskey barrel exploded from having a little whiskey left in the barrel and it set in the sun. Here they set the whiskey in the sun and have the barrel in the shade.

RESTAURANT patron: "These sausages are hardly up to the mark!" Waiter: "They ain't eh? Well, d'y'e expect Italian greyhound and thoroughbred Scotch terrier for two bits?"

"COME, get up and give an account of yourself," said a policeman to a prostrate drunkard. "How can you expect an account from a man who has lost his balance?" said a bystander.

Edison's latest is a machine to measure voice force. Secretly applied to your beloved's dwelling, you can ascertain how feeble her lungs are. It will break many matches, judiciously applied.

A YOUNG woman at Leslieville, Ontario, had two lovers, and each thought that was one lover too many, so they rowed a boat-race for her hand, and from this on the winner has to hoe his row, and her's, too.

The pigeons let loose at Columbus, Ohio, for a race to Newark, N. J., last week, have not returned. It is feared that they have either been killed by hawks or shot.—*Etc.* Why, they flew over the State and didn't see it.

A HUNTER, remarkable for the number and poverty of his dogs, and driven to desperation by the jokes of his comrades, rushed to the door and flung half a biscuit to the dozen snarling curs, exclaiming, "There, dern ye, stuff yourselves."

THREE or four times a couple appeared before a clergyman for marriage, but the groom, being invariably drunk, the clergyman refused to marry them. He reproved the girl, who burst into tears and said: "But he won't come when he is sober."

FERNANDO Wood was formerly an actor. In his younger days he played the hind legs of an elephant at the old Bowery Theatre, in some now-forgotten spectacular drama. We always wondered what ailed the elephant's hind legs. This explains it.

A New York physician has made the discovery that "not one person in three has legs of equal length, and that the number of left legs longer than they need be, nearly double that of the right." What a sad reflection upon dame nature's factory.

A COUPLE of neighbors became so hostile that they would not speak to each other; but one of them having been converted at a camp meeting, on seeing his former enemy, held out his hand, saying, "How d'y'e do, Kemp? I am humble enough to shake hands with a dog."

ALL bodies weigh less the further removed they are from the centre of the earth. A block of stone weighing 700 pounds upon the seashore, will weigh only 699 pounds if carried up a mountain three miles high. We'll furnish the stone and mountain; who'll prove the statement?

Young Folks' Column.

Allie's Revenge.

[Written for the RURAL PRESS by WINNIE WINTER.]

Allie Ventnor rushed in from school, saying: "Oh, mamma, I have been so ill-treated I feel as if I never wish to go back to school again."

"Well," said Mrs. Ventnor, "so much the worse for those who ill-treated you, and so much the better for you if you bore it bravely, as I hope you did. Tell me about it."

"Well, mamma, there is a girl at school named Lizzie Cunningham. She made fun of me before all the other girls. She said 'that my dresses were made out of your old ones; and she looked in my lunch basket and said 'that I had nothing to eat except bread and butter,' and all the girls laughed. I felt so angry that I could have slapped her in the face, but I remembered the promise I gave you, never to give an angry retort, and so I turned my back and walked away without saying a word; but I was so mortified and indignant that I hardly knew what to do with myself."

"You were wrong, Allie," said Mrs. Ventnor, "to be angry, but I am truly glad that you kept your promise, for had you resented Lizzie's unkindness you would only have done yourself harm and her no good; perhaps, by and by, she will be sorry for what she has done; at any rate, I wish you to cherish no unkind feelings toward her, but try to love her as you would a dear sister who does wrong through some strange passion which she appears not to be able to control."

"But, mamma," said Allie, "I do not understand why anyone can take pleasure in saying what will cause pain to another. I always feel as if I wished to say something to make others feel happier, and I tried to be particularly kind to Lizzie, because I thought she rather disliked me; though for what reason I never could tell, except that she is jealous of my being above her in the classes, as I am two years younger than she is."

"Are you in all of her classes?" asked Mrs. Ventnor.

"Yes, mamma, in all of them."

"And how do you stand in comparison with Lizzie?"

"I stand at the head, most of the time, in nearly all the classes, and Lizzie stands third and fourth, about half of each."

"Well, my child," said Mrs. Ventnor, "it may be that she is a little jealous of you on that account, or it may be that she dislikes you for some reason which she could not explain herself. Such instances are quite frequent; but, Allie, I wish you to act as if nothing had happened, and try, by the utmost kindness towards her, to see if you cannot banish this dislike she has for you, and then, perhaps, you will find her as loving and pleasant as she has hitherto been disagreeable. If you can do this, Allie, you will not only be happier for it yourself, but you may be the means of putting something into Lizzie's life that shall change her to a sweet and affectionate girl. You remember the hymn:

"Little deeds of kindness,
Little words of love—"

"Yes, mamma, I often sing it, and then I wish I had a chance to say kind words to some one; and I will try to love Lizzie, for I do not believe that she is a bad girl at heart, and if you will allow me I will take her the prettiest bouquet that I can get out of the whole garden."

"Do so, my dear, and tell me to-morrow evening how she accepted it."

The next morning as Lizzie Cunningham entered the schoolroom shortly before school-time, she was delighted to find upon her desk a beautiful bouquet and a tiny sealed letter addressed to herself; but when she opened the envelope and read "To dear Lizzie Cunningham with love of Allie Ventnor," an angry flush passed over her countenance and she raised the flowers in her hand to dash them out of the window; but something caused her to hesitate for a moment and then anger gave place to shame and sorrow; and placing the flowers carefully in her desk, she sat down with her face hid in her hands in a deep study. Presently the bell rang and all the scholars came in and took their seats. The three scholars, whose turn it was to assist in the opening exercises, took their seats on either side of "Miss Bennett, the teacher, and at a signal from her one called the roll, another read a chapter in the Bible, and the third read a hymn which was then sung by all; and lastly Miss Bennett offered a short prayer. Then she arose and requested the attention of the school for a few moments before beginning the regular exercises of the day.

"Will Allie Ventnor and Lizzie Cunningham please take seats on the recitation bench," called out Miss Bennett. When the girls were seated Miss Bennett unwrapped a beautifully bound book, and laid it on the table by her side. She then said: I witnessed, yesterday, from one of the back windows, a scene which has distressed me very much, not only as regards Lizzie and Allie, the two parties most particularly concerned, but so regards all who were present; for I thought my dear scholars loved each other too much to take an ungenerous part in what transpired at that time. Perhaps a great part of what occurred was done more through thoughtlessness than from a wilful disposition to do wrong, on Lizzie's as well as on the part of the others; but I think a severe reprimand is due to all

who took part in the occurrence; and I wish each one of them to go privately to Allie and ask her pardon for what they did, and I sincerely hope that nothing of this kind may happen again. Allie Ventnor, please stand up; I think some reward is due to you for the noble manner in which you conducted yourself yesterday in the occurrence just alluded to, and I therefore present you with this book in which I have written, "Presented to Allie Ventnor for exemplary conduct, by her affectionate teacher, Adelaide Bennett;" and I have further to say, that I have noticed for some time that you are capable of advancing more rapidly than the other members of your present classes and I therefore advance you to the next grade of classes above those you are now in. Lizzie Cunningham, please stand up.

Allie took the book which was held out to her, but stepping a little nearer the teacher, she modestly asked if she might speak a few words to her. "Certainly, my dear," said Miss Bennett. A whispered conversation of a few minutes then took place, and as Allie took her seat Miss Bennett said to Lizzie: "I had decided that to suspend you from school for a week and to require you to make a public apology to Allie for what you said to her yesterday was light punishment for the offense, even though committed without malicious intent; but through Allie's intercession and upon her guarantee for your future good conduct, I merely say that I hope never to have to put down in the record book such a thing against you again."

Need I say that Allie and Lizzie were bosom friends after that, and the whole school was taught a lesson which helped to make them kinder and more loving to one another? And this was Allie's revenge, to return good for evil.

Fountain Dell, August 17th.

GOOD HEALTH.

The Lessons of the Yellow Fever Scourge.

The terrible spread of the yellow fever scourge through our Southern cities, says the *Utica Herald*, is undoubtedly due in every instance to the neglect of the most ordinary sanitary precautions. The Southern cities are far behind those of the North in drainage. The condition of New Orleans and Memphis, when the yellow fever broke out in their streets, is said to have been filthy almost beyond belief. In the decimated town of Grenada, a correspondent writes that shortly before the outbreak of the epidemic, the main sewer leading through the town to the river caved in, and in order to repair the damage the sewer was uncovered for a long distance. It was found to be filled with the carcasses of dead animals, and the hot sun pouring upon them, the air was soon filled with stench and contagion. The penalty of that criminal carelessness is a terrible one. That the disease can originate from decomposition is not, we believe, clearly established; but there is no doubt that the common effect of the gases arising from the refuse left by imperfect drains is to so debilitate the human system as to create a predisposition to receive contagion, or to succumb to minor diseases which are not contagious. It is this predisposition which makes epidemics, and defies human skill.

There is no good reason to expect that the Southern scourge will spread to Northern cities. It will in fact stop, wherever it reaches a locality in which proper care has kept the population free from this predisposition; a debilitating climate also has its effect, and in both respects, the North is better off than the South. But it does not follow, on these accounts, that we can safely neglect the precautions which have been neglected with such fatal consequences in the Southern cities. Now is a good time to discover, both as to municipal and private drainage, whether it is in all respects what it should be. Private drains are especially liable, from long use, to become defective, and property owners are almost universally careless about constant inspection. A danger lurks here which is not confined to cities and villages, but extends to the farms. The pure and healthy air of the county is often poisoned by stagnant and neglected drains under the very nostrils of the thoughtless household. It is often years before the development of fatal disease; but it is sure to come in time. The same causes which are dealing out death in Grenada have brought the grim shadow into many a Northern household; and very often the dead have been buried and the source of the disease left unsuspected and untouched.

FEEDING INFANTS.—The subject of the feeding of infants was discussed at the annual meeting of the State Medical Society of New Jersey, and the *Medical Record* sums up the results as follows: "The mother's milk is generally conceded to be the best for the infant. But, even when this is abundant, it may be disadvantageous for the individual living on it, and a substitute be necessary. Country practitioners recommend cow's milk as the best substitute, while many in cities and towns speak highly of condensed milk. Of the preparations so various and so highly commended by those who put them on the market, the Imperial Granum seems to hold the first place in the estimation of medical observers. All agree in condemning the use of nursing tubes as unclean, even with the best of care."

DOMESTIC ECONOMY.

What to do with the Peaches.

PEACH MARMALADE.—When peeling peaches for canning or preserving, discard all unsound portions and save the balance of the peelings, also the pits. Crack a few of the latter; cover all with cold water and boil for an hour or two, then strain through a colander, being careful not to press too closely. Boil the liquid thus obtained until the quantity is appropriate for the peaches that are to be made into marmalade. Use the broken bits and inferior portions; weigh them and allow three quarters of a pound of sugar to each pound of fruit. Boil all together with the peach water, for an hour or two longer, and stir frequently to prevent burning. When cold it should be quite hard and will keep in bowls, or glasses, by covering with brandy papers and pasting the top with paper dipped in the white of an egg.

PEACH JAM.—Peach jam may be made in the same manner; boil it less, and put into air tight cans.

PEACH BUTTER.—Boil one gallon of sweet cider until reduced to half its quantity, then add a peck of soft peaches, peeled and quartered. Boil to a pulp, sweeten to taste, and five minutes before removing from the fire flavor with ground cinnamon and cloves. Put into jars and cover as directed for marmalade.

SWEET PICKLED PEACHES.—Peel the peaches; allow three and a half pounds of sugar and a pint of vinegar for every seven pounds of fruit. Pack the peaches in a stone jar with a few blades of mace, sticks of cinnamon, half a dozen cloves and a portion of the sugar between each layer. Add the vinegar and set the jar, closely covered, in a kettle of boiling water. Let it cook four hours, then set away and the following day drain off the juice, boil and skim it and pour hot over the peaches in the jar. Repeat this process the succeeding day, this time boiling down the juice until just sufficient to cover the fruit.

PEACH JELLY.—Rub the down from cling-stones, not too ripe; cut and bruise them and crack a few of the pits. Heat slowly and cook until the juice runs freely and the peaches are soft. Turn into a triangular bag and hang up to drain over night. In the morning measure the liquid and boil it for 20 minutes, then add a pound of sugar and a teaspoon of lemon juice for each pint; boil for five minutes longer and strain through a flannel bag. Put the bag in a large pitcher, pour a portion of the jelly into it, then gather up the top; holding the bottom with a fork, twist top of the bag, but not too closely. Pour the jelly from the pitcher into the glasses, which must be dipped in water, and set on a cold wet cloth to prevent breaking.—*Clara Francis in Baine Farmer.*

A COTTAGE WATER FILTER.—Those who cannot afford to buy a filter may easily make one. Stuff a piece of sponge in the hole of a flower pot, place above this a layer of pebbles, then a layer of coarse sand, and above this a layer of pounded charcoal three or four inches in depth. Another layer of pebbles should be placed above the charcoal to prevent it from being stirred up when the water is poured in. The contents of the flower pot should be occasionally renewed. But by a small addition to this a cottage filter may be made which, for practical use, is quite equal to the most expensive filter of corresponding size. It consists of two flower pots, one above the other, the lower one fitted with a sponge and filtering layers above described, and the upper one with a sponge only. The upper pot should be the largest, and if the lower one is strong the upper one may stand on it, or a piece of wood with a hole to receive the upper pot may rest on the brim of the lower one. The two pots thus arranged are placed on a three-legged stool with a hole in it, through which the projecting part of the lower sponge passes, and the water drops into a jug placed below. The upper pot serves as a reservoir, and sponge stops the coarser impurities, and thus the filtering layers of the lower one may be used for two or three years without being renewed, if the upper sponge be occasionally cleaned. Care must be taken to wedge in the upper sponge tightly enough to prevent the water passing through the upper pot more rapidly than it can filter through the lower one.—*Leisure Hour.*

MAYONNAISE ON TOMATOES.—Choose firm, smooth, ripe tomatoes, lay them in the ice box and keep them as cold as possible until they are placed on the table. Prepare the dressing by beating the yolks of two raw eggs with a teaspoonful of mixed mustard, and adding to it, drop by drop, olive oil, beating constantly until it begins to thicken; then put in a few drops of lemon juice and more oil; alternating the two, until the sauce has become so thick that it will not run. Stir in a teaspoonful of salt and a teaspoonful of rich cream, and set it away in a covered bowl. The eggs should be cold, the oil added slowly, and the stirring (with a silver fork) be unremitting in order to make this sauce a success. The cream may be omitted, and strong vinegar used in place of the lemon juice. Peel the tomatoes with a sharp knife (do not scald), arrange them neatly on a dish, and turn the sauce over them. Garnish with curled parsley, or place a border of finely shaved cabbage around the outer edge and parsley in the center.



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SAN FRANCISCO:

Saturday, September 7, 1878.

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The Week.

While all nerves are strung in the country in the laudable effort to enrich the State by the full-in-gathering of the year's bountiful productions, the city is excited over new revelations of alleged baseness in political and financial circles. The daily press is laden with accounts charging the managers of two of our best known savings banks with loaning money upon worthless securities, fully knowing them to be such, and led to this unholly hazard of the people's money for the sake of commissions with which they might line their own pockets. Another savings bank has been closed by the Bank Commission because it has been making loans on commercial paper, thus sinning against the security which the law decrees to depositors of savings. As these examples of perfidy to public trusts are brought to light and added to the villainies which have gone before, one is led to wonder whether indeed any strand of our financial fabric is untouched by the decay of corruption. There is, however, one hopeful feature in the manifold disclosures of baseness which are being made, and that is that it is better to have all the symptoms of dangerous disease developed and made generally known, than the sure cure of upright dealing and faithfulness to public trusts may be the sooner applied. Let the evil virus expend itself as soon as possible, that the era of base dishonesty may be closed, and the era of honesty and uprightness in public places may be speedily begun. Hope on! The evil will at length give way to the return of traditional purity and nobility.

CALIFORNIA AGRICULTURIST AND ARTISAN.

A Word to Its Patrons.

Yielding to the inexorable law of necessity which governs the conduct of men in all business relations, the editor and publisher of the *California Agriculturist and Artisan* relinquishes into able hands the entire establishment, business and good will of the magazine.

Ill health compels a release from the labors necessary to properly conduct the journal and its business, while the hard times which seem to singularly affect subscribers in arrears, to our damage, have a bearing. The first consideration with an honorable publisher is to secure to each subscriber who has paid in advance his full complement of reading matter. Would that all subscribers were equally as just toward all worthy publishers. In order to satisfy in the most complete manner the rights of my patrons in this respect Messrs. Dewey & Co., publishers of the *RURAL PRESS*, who have purchased the *Agriculturist*, agree to send all paid-up subscribers the *PACIFIC RURAL PRESS* for a satisfactory and generous length of time. Owing to the fact that the *PACIFIC RURAL PRESS* is one of the very best conducted and most enterprising and reliable agricultural papers in the United States, and is devoted specially to the best interests of Pacific coast readers, we can cheerfully ask for it the patronage of our friends. Those in arrears to the *Agriculturist* will be waited upon by special agents of the *RURAL PRESS*, authorized to issue valid receipts to all who pay. The only words fitted to this connection are *pay up*, and then subscribe for the *RURAL PRESS*.

With confidence in the ability and well-earned integrity of Dewey & Co. to carry out on their part the agreement to supply subscribers with a paper worth the money paid for it, I rest the matter with them and our former patrons.

It is with a feeling I shall not attempt to express that I thus cut loose from the journal I established and have conducted for years. To my many friends who have kindly aided me, I shall ever feel under obligations. I am invited by friend Dewey to use the editorial columns of the *RURAL* as a medium for keeping up an acquaintance with you all, and, as soon as my health will admit, may occasionally do so.

As I was formerly in the employ of Dewey & Co., and assisted in establishing and placing upon a firm basis the *PACIFIC RURAL PRESS*, it is not entirely like losing my identity that I see the *Agriculturist* merged into the *RURAL*. A field large enough for both individuals may be as well filled by the one.

S. HARRIS HERRING.

San Jose, Cal., Aug. 28th, 1878.

Greeting and Welcome.

The *PACIFIC RURAL PRESS* opens wide its door and extends a cordial greeting and welcome to its thousands of new readers who have heretofore given their support to the *California Agriculturist and Artisan*. That honestly and ably conducted journal has been consolidated with the *PACIFIC RURAL PRESS*, by virtue of our purchase of the *Agriculturist* establishment and good will. Mr. Herring worked long and well to place his magazine upon a permanent basis, and the reasons which he now gives for withdrawing from the effort may be read in his own words in another column. His failure to attain the full end of his ambition in reference to his paper reflects no discredit upon him. His work has done him honor, and honor will be accorded to him by those who have lent their aid to his endeavors.

You, enduring friends of his and the *Agriculturist*, we now greet and invite to a friendly examination of the *PACIFIC RURAL PRESS* as an applicant for your esteem and support. We welcome you to honored places in our wide circle of true friends and earnest patrons. We believe that you will find in the *RURAL PRESS* all those characteristics of literary cleanliness and freedom from support of dishonesty and quackery in advertising which you esteemed in the *Agriculturist*. You will find the same spirit of true progress in agricultural practice; the same cordial cheer and sympathy in our effort

to entertain innocently, to advise fraternally and to advance your varied interests devotedly and diligently.

And while you will find the same true spirit in our work, you will find it developed and embodied to a greater degree than in the *Agriculturist*, because ours has been the wider field and the greater number of laborers. To us has been entrusted a measure of success which enables us to give, comparatively speaking, each week as much as you have received each month. With this opportunity for it, we can call to your aid a much wider circle of experience and investigation, and place at your command a much greater fund of valuable information concerning the successful practice of agriculture on this coast. We can give you commercial information, fresh each week from the centers of trade, which it was not in the province of a monthly magazine to furnish, but which is invaluable in the conduct of agricultural operations. In short, we trust to lead you through wider researches into the true science and practice of agriculture; to greatly extend your information of available cultures and the profitable preparation and sale of their productions; to open to your contemplation new avenues of profit in your stock and lands; to contribute each week a full quota of entertainment, of moral and hygienic suggestion, and of domestic economy, for the queens, princes and princesses of your firesides—in all things believing that your future acquaintance with our work will not lead you to appreciate the *Agriculturist* the less, but the *RURAL PRESS* the more.

We invite you to no arm's-length participation in our work. Ours is a community of enthusiastic co-operators. As we invite all to read, so we invite all to write as well. Thus it is that the *RURAL PRESS* gains its high place as an exponent of agricultural practice on this coast. It is because hundreds of interested workers in all quarters of the State communicate to us the lessons of their experiences and the results of their investigations, that we are able to bring out a paper whose columns bear at all times the fresh fragrance of the soil and not the stale odors of the city office. This is the manner of our work, and this is its guiding principle—to aid each with the facts, methods or ideas which to his wants are nearest allied; and we always welcome intimation from any reader of what his desires may be. To active participation in this design we welcome you—new friends whom we would make true friends.

We congratulate the "old *RURAL*" and all its supporters upon your accession to our ranks. We expect to gain much from your support and co-operation for the advantage of all old readers, in the same way that we extend their assistance to you. As we have described our idea of agricultural journalism, it must appear that each accession to our lists brings with it a possibility of a wider and richer general fund of experience and information to draw upon. Your coming will give us new nerve and strength for work. Those who have firesides blessed with the lisp and prattle of home jewels, know well the cheering flash of enthusiasm to be true to the new responsibility which pervades one, as each new star rises above the horizon of the home. Not otherwise is our feeling to-day as the new group of many-fold twins appears in the *RURAL* home circle. You are babes in our household to-day, but it shall be through no lack of labor nor devotion on our part, if you do not quickly grow into vigorous helpers and earnest supporters in the work we love.

THE Baker county, Oregon Agricultural Fair, begins on the 30th of September. There will be given \$1,385 for running and trotting stock,

The Soil Specimens for the Paris Exposition.

It will be remembered that at the time when it was contemplated to have resources of California somewhat extensively represented at the Paris Exposition, a circular was issued by the chairman of the temporary commission organized in this city in advance of legislative action, requesting persons in the various agricultural districts of the State to select representative specimens of the soils of their region and transmit them to the Chairman of the Committee on Agriculture and Horticulture, Prof. Hilgard, at the University. This circular was accompanied by detailed instructions, drawn up by Prof. Hilgard, in regard to the mode of taking soil specimens, and the giving of as full a description as possible, of all the local circumstances of occurrence, climate, etc., that might influence the agricultural value of the soils sent. Under this call, about 40 sets of soil specimens were received at the University, including some 120 specimens of soils and sub-soils from the most prominent agricultural regions. Most of these sets were accompanied by valuable reports descriptive of the districts represented by them; which reports were to have been printed, wholly, or in part, as a pamphlet to accompany the collection of California soils and products, to be distributed to visitors at Paris. The failure of the Legislature to make provision for the representation of the State at the Paris exposition, left this collection, together with the expenses incurred, on the hands of Prof. Hilgard.

We are glad to announce that by action lately taken by the Regents' Committee, to whom this and other subjects pertaining to the Agricultural Department of the University were referred, the outlay incurred is assumed by that department, the collection and reports thus becoming part of the material for the construction of an agricultural map of the State, and for the systematic investigation of its soils and products, that has been inaugurated and prosecuted by Prof. Hilgard for several years past.

Those who have given their time and pains to the collection of the soil specimens and the compilation of reports thereon, may thus rest assured that these are "where they will do the most good;" and that in due time their reports, or the substance thereof, elucidated by the examination of the soils executed in the laboratory of the Agricultural Department, will be published as part of the regular reports of the same.

SPARROWS IN THE EUCALYPTUS' WAKE.—It seems that the Algerians have reclaimed their homes from drouth and pestilence, only to give them to the pestiferous sparrows. An Algerian paper, as translated by the London *Farmer*, says that imagination fails to form an idea of their number; the trees are covered with their nests, and their ceaseless twitter and chirp may be heard at a distance of eight kilometers, like the sound of a stormy sea breaking on the rocks; and their appearance, as they set out at morning in search of food, is like that of a large black cloud when thunder is threatening. The whole of the rural population is obliged to keep watch and ward over their fields, and the slightest intermission is quickly punished by the total loss of their crops of wheat or oats. The colonists wage war incessantly. They feed on sparrow dumplings and sparrow's eggs, they throw sparrows to their dogs and pigs, and yet "the cry is, still they come!" In fact, says our contemporary, the French have conquered the Arabs and won their colony, only in their turn to be conquered by the sparrows.

DEATH OF GOVERNOR HAIGHT.—Ex-Governor H. H. Haight died in this city September 2d, of disease of the heart. Aside from his discharge of the gubernatorial trust, he has been prominent in this State for a number of years, and has won the esteem of both his political friends and opponents. His death is generally regretted. He was a member-elect of the coming Constitutional Convention.

ON FILE.—"Tree Queries," O. S.; "Is it Consistent?" C. M.; "Old Fashioned Neighbor," F. F.; "Apiary," H.; "How we got Melons," M. P. O.; "Drainage," J. M. H.; "Scenes in the High Sierras back of Yosemite," J. G. L.; "Notes," H. E. H.; "Tulare County," J. W. A. W.

THE Northwestern barley crop has been injured by wet weather in harvest.

QUERIES AND REPLIES.

Judging Cattle by a Scale of Points.

EDITORS PRESS:—It has long been a matter of surprise to me that, considering the importance the breeding of Short Horn cattle has assumed in this State, there has been no scale or rule adopted by which judges can be guided in determining the merits of the different animals. The usual practice in England, the home of the Durhams, is for each agricultural society to adopt its own scale, by which the judges for the time being are governed, the only material difference in any of them being the number of points to be credited to the different parts. For instance, some societies allow for the horns 3, for the back 5, for the tail 2, for the throat 1, and so on. In judging, each point is examined separately, and decided upon. When the list is completed, the numbers are added together and the one having the highest is awarded the prize. The scale which I send with this letter only gives one for each point, and was adopted many years ago by one of the prominent agricultural societies of England, and may be somewhat out of date and subject to modification; but would certainly be a great improvement on the present hap-hazard system in vogue at our State and district fairs, and assist the judges in placing the blue ribbon where it rightfully belongs. If the attention of the President of the California State Agricultural Society be called to the subject, he might cause it to be put in practice at the ensuing State Fair, and the example which I have no doubt would be followed by every agricultural society throughout the State. It would be a very simple matter to have the lists printed and pasted in the books or handed to the judges at the time of their appointment.—JAMES R. HEBBRON, Natividad, Monterey county, Cal.

The suggestion is a good one, and we should be pleased to see it enforced. Where the judges are well informed breeders and able to judge of the points presented in the different animals by the standard which they know to be true, there can be no doubt that their verdicts will embody far more truth than is reached by judges who lump their judgments by some empirical standard of their own, and never, as the saying goes, "even put their hands upon the cattle." The scale of points which Mr. Hebbroon sends is a good one, and perhaps a better working schedule than the one which we shall present; but as our aim is to give a general idea of the system of judging by points, we choose ours because we are able to make an engraving to accompany it, and thus appeal to the eye of one unacquainted with a close analysis of the parts of an animal. We think it is almost too near the time of holding this year's fairs to put in practice a new system of judging, because the matter must be discussed and those interested won to an approval of it before satisfaction would result from its use. It would also be necessary to have a scale of points for each of the leading breeds of cattle adopted by the State Board of Agriculture, before the system could be made comprehensive.

In order to start the discussion we present a scale of points and a diagram to illustrate them, as proposed by Mr. Alexander Bruce, chief inspector of stock in New South Wales, and in which is embodied the precedents of the leading English authorities. The illustration gives an outline of a Short Horn bull, with the different points marked to correspond with the scale. The whole number of points is valued at 1,000

Scale and Values of Points.		
I. SIZE.		
1 Size	— 30	19 Chine..... 55
II. QUALITY.		
2 General Quality.		
2 General Style, Carriage and Vigor	60	20 Foreribs..... 40
3 Bone.....	20	21 Foreflank..... 35
4 Color.....	10	22 Back..... 25
	— 90	23 Backribs..... 40
5 Hair.....	30	24 Belly..... 15
6 Handle.....	60	25 Loin..... 45
7 Evenness of Flesh and Fat.....	40	26 Flank..... 45
	— 130	
III. FORM.		
Forequarter.		
10 Forehead and Face	30	27 Hip or Hook..... 15
11 Eye.....	20	28 Rumps..... 50
12 Horn and Ear.....	25	29 Tail and Set on..... 25
	— 75	
Hindquarter.		
13 Neck and Throat	40	30 Quarter..... 30
14 Breast.....	20	31 Thigh..... 20
15 Brisket.....	25	
	— 85	
Legs, etc.		
16 Crops.....	15	32 Twist..... 40
17 Shoulder.....	30	33 Testes..... 10
18 Forearm.....	10	
	— 55	
		34 Knee and Gambrel..... 15
		35 Leg..... 19
		36 Hoof..... 5
		1000

In the way in which the foregoing scale has been drawn up the judging might either be

carried out—(1st,) by the single points, of which there are 36, at the values given in the first column; or (2d), by the groups, of which there are 14, at the values summed up and given in the second column; or (3d), by the seven sub-divisions of "Size," "General Quality," "Head," "Fore-quarter," "Middle," "Hind-quarter," and "Legs," etc., at the values appearing in the third column.

Of the three ways here mentioned, the first, the single point system, would, for breeding stock, not only be the simplest, but also that by which the awards would be the most correct, and afford the greatest amount of information; for instead of having to come to a decision—as they would have to do in judging by groups, with regard to two or three different points all differing to some extent in the different animals in the class, and thereby causing discussion and delay—the judges, working under the single points, would have to deal with one point at a time; and, having only the one question to decide, would be able to give their awards rapidly and correctly. In fact, judging by the single points, it is just carrying out the wise old

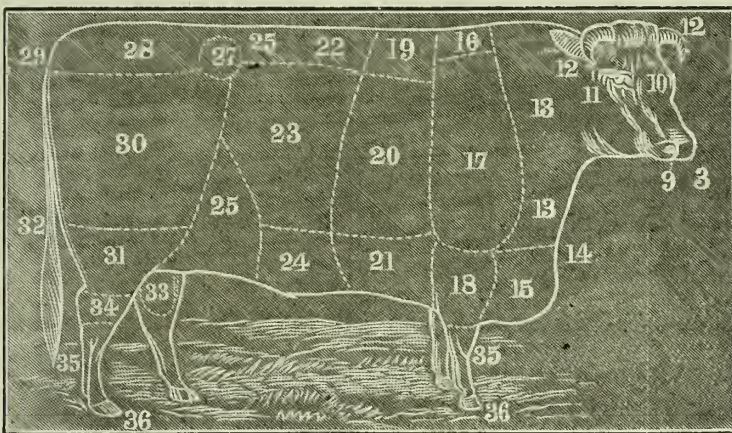


DIAGRAM SHOWING LOCATION OF POINTS ON A SHORT HORN BULL.

'saw' of doing only one thing at a time, and consequently doing it well. Of course to make the use of these points intelligible to all there must be a description of what constitutes excellence, in the different points. The length of such a description precludes our introducing it at this time, but we may give it in some early issue of the PRESS. We may remark that there are already authorized scales of points for the Jerseys, Ayrshires and perhaps for the other breeds of cattle, and separate scales for judging the bulls, and cows

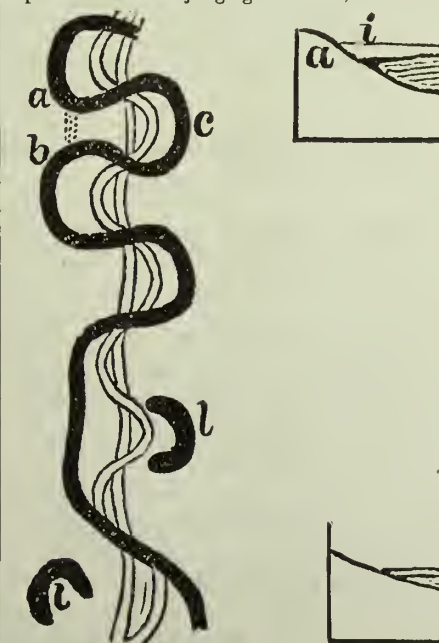


Fig. 1. Method of Production of Winding Course of Rivers.

and heifers of each breed. We have all these at hand and may print them if the subject excites sufficient interest to warrant it.

Proposed Cure for Glanders.

EDITORS PRESS:—I see by your valuable paper that the glanders is again showing itself. I write to send you a recipe for its cure, which to my knowledge has never been made public: Pulverize three tablespoonfuls of copperas; mix with flour and water to a dough; make into a roll and lay on the root of the horse's tongue to swallow. Then, 24 hours later, three tablespoonfuls alum pulverized and mixed as before. Then follow up each day by alternating. For the second dose of copperas give two spoonfuls; the alum the same. Next dose is one teaspoonful of each. It is said by those that know that it has proved successful when taken in time. I would like to hear the result of actual trials.—R. M. D., Santa Ana, Cal.

The Deposit of Sediment by Rivers.

It has been hinted very strongly if not directly stated in the testimony at the great mining debris trial, that the miners are doing only what Mother Nature herself would do in a somewhat longer time if left to herself. In pursuit of that idea, it has been interesting to look over what Le Conte and Dana say about the erosive power and the deposits of rivers.

It will be seen that where the river has to be leveed to protect the adjacent country from the overflow of the river whose bed is raised by the deposit of sediment, there is introduced an artificial condition. It appears that so long as the deposit of sediment continues, the levees must be continually raised until the river runs through an aqueduct much higher than the surrounding country, and the result is not a natural one.

To a system of combined erosion and deposit is due in great measure the winding courses of rivers. This cannot be more concisely and clearly put than as it is found in Le Conte's new work on geology. From this book our figure is taken. This production of the winding course is, he says, "most conspicuous and most

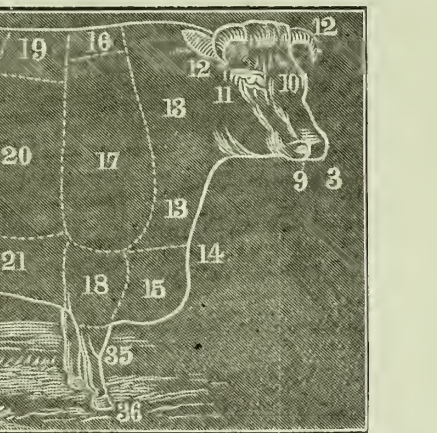


Fig. 2. Natural Levee.

easily studied in rivers which run through extensive alluvial deposits. If the channel of such a river be made perfectly straight by artificial means, very soon some portion of the bank a little softer than the rest will be excavated; this will reflect the current obliquely across to the other side, which will become similarly excavated. Thus the current is reflected from side to side, increasing the excavations. In the meantime, while erosion is progressing on the outer side of the curves, because the current is swiftest there, deposit is taking place on the inner side, because there the current is slowest; thus, while the outer curve extends by erosion, the inner curve extends, *pari passu*, by deposit (Fig. 1), and the winding continues to increase, until, under favorable circumstances, contiguous curves on the same side run into each other, as at *a b*, and the curve on the other side is thrown out and sifted up. Thus are formed the crescentic lakes or lagoons, *u*, so common in the swamps of great rivers. They are abundant in the swamps of all the Gulf rivers, especially the Mississippi. They are old beds of the river, thrown out and silted up," as above.

Of flood-plain deposits, more interesting in the present case, he says: "All great rivers annually flood portions of level land near their mouths, and cover them with sedimentary de-

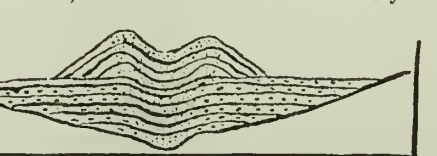


Fig. 3. Artificial Levee.

posits. The whole area thus flooded is called the flood-plain. These flood-plains are very extensive, and the deposits very large, in the case of rivers rising in lofty mountains and flowing in the lower portion of their course through extensive tracts of flat country. In the lofty mountains the current runs with great velocity, and gathers abundant sediment; on reaching the flat country the velocity is checked, the river overflows, and the sediment is deposited. The flood-plain of the Mississippi river is 30,000 square miles. The flood-plain of the Nile is the whole land of Egypt. The flood-plain of a river may be divided into two parts, viz: the river-swamp and the delta. The river swamp is that part which was originally land surface; the delta that part which has been reclaimed from the sea or lake by the river.

"We have already seen that with every recurrence of the rainy season or the melting of snows the flooding and the deposition of sediment are

repeated. Thus the river-swamp deposit increases in thickness, and the level of the whole flood-plain rises continuously. Fig. 2 is an ideal section, showing the manner in which the flood-plain is successively built up; *a a a* is the supposed original configuration of the surface, *b b b* the successive levels of deposits, *c c c* the level of the river at lower water, and *i i i* the level of flood water.

The extent of such river-swamp deposits is sometimes very great. The river swamp of the Nile constitutes the whole fertile land of Egypt above the delta. The river swamp of the Mississippi river, or its flood-plain, exclusive of the delta, etc., tends from 50 miles above the mouth of the Ohio to the head of the delta, a distance of about 700 miles; its width is 10 to 15 miles, and it includes an area of 16,000 square miles. It is bounded on either side by high bluffs belonging to a previous geological period. The depth of this deposit at the head of the delta is assumed by Zyll to be 264 feet. But Prof. Hilgard has shown that but a small portion of this is actually river deposit."

In Dana we find it stated, on the authority of the Delta Survey, that the amount of silt carried down by the Mississippi to the Gulf of Mexico is about 1-1500 of the weight, and 1-2900 of the volume of the water, which would equal in one year 812,500,000,000 pounds, or a mass one square mile in area and 241 feet deep. At different times the following data have been obtained: Sediment carried by the Rhone at Lyons, 1-17000; at Arles, 1-2000; in the delta, 1-2500; in the Ganges river, 1-510. According to Allard, in the mining debris trial, the amount of sediment in the Bear river varies from 1-67 to 1-17 of the weight of the water. If, as Ashburner said, these estimates are five times too great, they should be altered to 1-335 and 1-85. The condition of rivers are, however, so different that any comparison of such figures forms in itself an argument.

To return to Dr. Le Conte. "It is seen by the cross section (Fig. 2) that the level of the river-swamp slopes gently from the river outward, so that the river is bounded on each side by a higher ridge, *d d*. The material of this ridge is coarser than that of the swamp further back. Such natural levees are found along all rivers subject to regular overflows. They are formed as follows: In the times of flood the whole flood-plain is covered with water moving slowly seaward. Through the midst of this wide expanse of water runs the rapid current of the river. Now, on either side, just where the rapid current of the river comes in contact with the comparatively still water of the flood-plain, and is checked by it, a line of abundant sediment is determined, which forms the natural levee. Except in very high freshets these natural ridges are not entirely covered, so that the river in ordinary floods is often divided into three streams, viz: the river proper and the river-swamp water on either side. They cannot, however, confine the river within its bank and prevent overflows, since the river bed is also constantly rising by the deposit. Thus the river bed, the natural levee, and the river swamp, all rise together, maintaining a certain constant relation to one another.

"This constant relation is interfered with by the construction of artificial levees. These are constructed for the purpose of confining the river within its banks, and thus reclaiming the fertile lands of the river swamp. As the bed of the river continues to rise by deposit, the levees must be constantly elevated in proportion; but the river swamp, being deprived of its share of deposit, does not rise. Thus, under the combined effect of human and river agencies contending for mastery, an ever-increasing embankment is formed, until finally the river runs in an aqueduct elevated far above the surrounding plain. This is very remarkably the case with the river Po, which is said to run in a channel that has been thus elevated above the tops of the houses in the town of Ferrara. It is probable that the effect of levees in raising the river bed has been greatly exaggerated. Fig. 3 is an ideal cross section of a river and flood-plain left at first to the action of natural causes for a time, but afterwards interfered with by the construction of artificial levees. The dotted strata show the work of nature, and the undotted the work of man. It is easy to see that the destructive effects of overflow from accidental crevasses become greater and greater with the elevation. The Po has thus several times broken through its levees and deserted its bed, destroying several villages. The best examples of rivers successfully leveed are those of Italy and Holland. The Mississippi has never been successfully leveed; but if it should be, it would commence to build up a similar aqueduct, until the whole bed of the river would finally rise above the level of the river swamp."

PUBLIC LAND MATTERS.—Advices from Washington by telegraph, announce that Secretary Schurz has reaffirmed his decision made last July, that the lands granted to railways, and not disposed of within three years after the completion of the roads, have become again Government property, and are subject to pre-emption, etc., like other Government lands. It is probable that the railroads will now take the issue to the Supreme Court. It is telegraphed that Secretary Schurz is about to issue a circular relating to trespasses upon Government timber lands.

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Thirty miles from the county seat, and 20 miles from the Coast, one of the healthiest localities in the State, especially for consumptives. The place is fenced off in six different fields. Plenty of water and timber for all purposes. A good orchard. Vegetables of all kinds grow well. A good dwelling with six rooms, ceiling and painted inside, good frame barn, granary, storeroom, smokehouse, etc.

Also, Six Hundred acres of grazing land, well fenced, three miles from the above farm, plenty of water and timber for all purposes. Price, \$2,250.

For further particulars, address "B. T." care of DEWEY & CO., PACIFIC RURAL PRESS office, San Francisco, Cal.

To Lease on Favorable Terms,

50,000 Acres of IRRIGATED LAND in Kern County, with abundance of Water Free, in tracts of 50 acres and upwards, with comfortable House, good Barn, and well of excellent water. Crops are sure, an average of 30 bushels of wheat per acre, and other products in proportion can be expected.

Industrious farmers with stock and implements will there find every advantage in acquiring a home and a competence.

COLONIES WANTED.

For further particulars inquire of

McAFEE BROTHERS,

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One of the best ranges in the State. At present working 375 stands Italian Bees. Apply for particulars to

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EDUCATIONAL.

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BUSINESS COLLEGE,
24 Post Street,
Near Kearny,
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

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Do you want to buy, sell or exchange lands or other property in any part of the U. S. or Canada? Are you a Soldier or Sailor, in want of a Patent? Why not obtain more Bounty or Pension? Do you want to locate Government or State Lands without settlement? Why not? When I have the well-known Approved Soldiers' Additional Homesteads, under seal of the General Land Office, and that can be located without settlement, upon any Government \$1.25 or \$2.50 lands, subject to homestead. The Sioux Half-Breed Scrip, for location upon unsurveyed lands.

Land Warrants and Scrip of all Kinds

For cash, or part on time. Good title given or no pay. Have you any lands with an imperfect title to sell, or choice vacant lands you know of which could be located to advantage; or claims not lawfully held, which we could contest. Let me hear from you in full, and I will do my best to inform you what is to your advantage.

I will mail you a circular explaining all, and a copy of the new Pension Law. Address, (plainly)

D. H. TALBOT,

General Land, Scrip and Warrant Broker, STOKY CITY, IA.

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AT LOWEST RATES,

ON FIRST-CLASS COUNTRY REAL ESTATE AND OTHER APPROVED SECURITIES.

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PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

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M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

GEORGE McCracken, San Jose, Cal. Pure blooded Cotswold Sheep for sale.

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ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

W. & J. ROBINSON, Hanford, Tulare Co., Cal. Importers and Breeders of Thoroughbred Berkshire Swine and Pure Brown Leghorn Fowls. Scotch Colley (Shepherd) Pups for sale. Imported parentage on both sides.

A. J. TWOGOOD, Riverside, Cal., Importer and Breeder of Pure Bred Poland-China Hogs.

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THOROUGHbred POULTRY.

116 Acres
DEVOTED TO
FANCY
POULTRY.

Unlimited Range.
Healthy Stock.
Largest Yards
on the Coast.

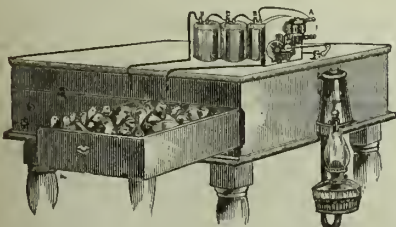
Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.

Safe arrival of Fowls and Eggs Guaranteed.

Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents. Send stamp for price list. Address

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MONEY in CHICKENS



If You Want to Make Money by raising any number of chickens, at any season of the year, without setting hens, for descriptive circular of the best, most practical, and most reliable Incubator in the world, address

EDWARD A. SAMUELS,
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EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

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NAVY
Tobacco

Awarded highest prize at Centennial Exposition for fine chewing qualities and excellence and lasting character of sweetening and flavoring. The best tobacco ever made. As our blue strip trade-mark is closely imitated on inferior goods, see that Jackson's Best is on every plug. Sold by all dealers. Send for sample, free, to C. A. JACKSON & CO., Mfrs., Petersburg, Va.

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GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

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At Gray's No. 105 Kearny Street,

On receipt of the amount in postage stamps, any of the following pieces will be mailed, post-paid:

BABY MINE, (Song).....Smith, 35 ets
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Send for complete Catalogue of Music and Descriptive list of the



State where you saw this advertisement.

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REMOVAL.

Herrmann, the Hatter, has removed to more commodious quarters at

No. 336 Kearny Street,

Between Bush and Pine, where he will continue to sell the

Finest Hats at the Lowest Prices.

TO LUMBERMEN.

The Property of the Duncan's Mills Land and Lumber Company,

Sixty miles from San Francisco, at the terminus of the North Pacific Coast Railroad, Sonoma County, is offered for sale on very favorable terms.

There are 3,500 acres of Redwood Timber land, new steam Saw-mill, general store, dwellings, logging railroad, water works, etc.

Satisfactory reasons for selling will be given to prospective purchasers.

Also, if desired in connection with the above, a lumber yard on the Bay of San Francisco, having superior facilities for shipping by rail or by water, and having a large and constantly increasing business.

For full particulars address

JOHN F. BYXBEE,
No. 22 California Street, San Francisco, Cal

California Steam Navigation Co.

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ALICE GARRATT and CITY OF STOCKTON

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DAILY (Sundays excepted) at 5 P. M., from Washington Street Wharf, near foot of Market street.

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Fine Jewelry Made to Order. Complicated Watches Repaired.

25 FANCY CARDS, Snowflake, Oriental, etc., in 25 styles, with name, 10c. J. B. HURSTED, Nassau, N. Y.

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Another Wonderful Cure Effected by CALIFORNIA ELASTIC TRUSS!



CALIFORNIA ELASTIC TRUSS COMPANY, W. J. Horne, Proprietor.—DEAR SIR:—I feel that I owe it to you and to humanity to write the fact that I have been SUCCESFULLY CURED of a bad case of Rupture of 30 years' standing, by one of your incomparable Trusses, which I purchased from you three months ago. I cannot describe the suffering, both physically and mentally, that I have undergone during that period; and now I feel like a new being. I have worn all kinds of Trusses, both Steel and Elastic, and never received any permanent relief until I tried yours. Its simplicity of construction, and facility with which it can be adjusted, and the ease and perfect freedom to the motions of the body with which it can be worn without causing any irritation, are its chief merits, and it is a perfect supporter. I have not had any sign of a return of the Rupture since the first day I put it on, and feel that I am PERFECTLY CURED. It is invaluable, and the fact should be known to the world. You can refer anyone to me on the subject of their merits.

I am truly yours, ALFRED J. BURKE,
Chief Mail Clerk S. F. Daily Evening Post.
San Francisco, July 20th, 1878.

Endorsed by the Medical Profession.

SAN FRANCISCO, July 9th, 1878.
California Elastic Truss Co.:
After practicing medicine many years in this city, during which time I have had an extensive experience in the application of all kinds of Trusses, I can and do recommend yours as the best in every respect, for it is as near perfection as modern science can make it. It has many advantages over the torturing steel hoop Trusses, which inflict great injury on the hips and spine, bringing on other distressing ailments, such as lumbago, morbid affections of the kidneys and numbness in the lower limbs, all of which are avoided by wearing the California Elastic Truss. It is not only a perfect retainer, combining ease and comfort, but the pressure can be changed to any degree. It also remains in the proper place at all times, regardless of the motions of the body, and is worn night and day with perfect ease. It is superior to any of the Elastic Trusses now in the market, while it combines the merits of all. 1st—It is easily adjusted on and off with snaps, doing away with straps and buckles. 2d—The universal spring between the plate and pad prevents all irritation, which is a godsend to the sufferer. 3d—The pad is adjusted on and off in an instant, and can be changed for any other size and form most suitable to the case. In fact, it combines every quality essential to comfort and durability, and is unequalled in lightness, elasticity, natural action, and artistic finish. Many of my patients who are afflicted with hernia are wearing them, and all shall in the future, for I think the great ease by which these purely scientific appliances are made efficacious, is truly remarkable. You can refer any parties to me on the subject of their merits. I remain yours truly,
L. DEXTER LYFORD, M. D.,
Physician and Surgeon,
609 Sacramento street, San Francisco.

A Physician's 45 Years' Experience.

COLUMBIA, Tuolumne Co., July 16th, 1878.
W. J. Horne, Esq.—DEAR SIR:—For some time past I have used, in my practice, the California Elastic Truss, with entire satisfaction in most cases of complicated hernia of both sexes. During a practice of 45 years I have found no Truss that would, with the same ease and certainty, retain the required adjustment, the pressure being always under the immediate control of the patient. The simplicity and ease of application is of itself a guarantee to every experienced physician. I have the honor to remit by mail the amount due, knowing that I contribute to the alleviation of afflicted humanity.

Yours truly, J. P. TIBBITS, M. D.
It is constructed on scientific principles and sells on its merits. If you want the best Truss ever manufactured, don't forget the name and number.

Trusses forwarded to all parts of the United States at our expense, on receipt of price.
Send for Illustrated Catalogue and Price List, giving full information and rules for measuring.

CALIFORNIA ELASTIC TRUSS CO.,

615 Sacramento Street, San Francisco, Cal.

M. COOKE

R. J. COOKE.

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit & Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY.

WANTED—A FARM.

To lease with option of purchase, from 100 to 200 acres of land, with water and timber suitable for general farming, with house of six rooms or more; near to a public school, and within 20 miles of San Francisco, having good communication by rail or water. Address, DAWSON, at this office.

Stock Notices.

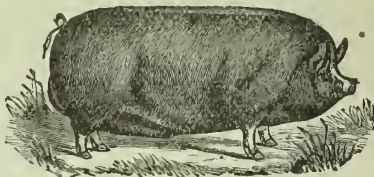


SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

E. W. WOOLSEY,
Berkeley, Alameda County, Cal.

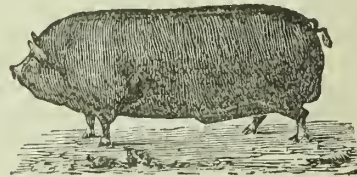
BERKSHIRES.



Breeder and Importer of the "Crown Prince," "Sambo," and "Bob Lee" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.

PETER SAXE, Russ House, San Francisco, and Los Angeles City, Cal.

BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,
18th and A streets, Sacramento City, Cal.

BERKSHIRE and POLAND CHINA PURE BLOODS.

The undersigned have a supply of young pure bloods of Berkshire and Poland China breeds of Pigs, and one Poland China Boar 19 months old, for sale. We will be ready to furnish to order at any time in the future. Pedigree furnished. We are making a specialty of these breeds for market.

GREVES & WHITE,
Riverside, San Bernardino Co., Cal.

DALTON & GRAY, Commission Merchants,

WHOLESALE DEALERS IN

All Kinds of Country Produce.

404 & 406 Davis Street, San Francisco.

Consignments Solicited.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce.

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

S. D. BURBANK, OPTICIAN,

Special Attention to Fitting Eyes.

OFFICE—NICHOLL BLOCK, NINTH STREET,

(BETWEEN BROADWAY AND WASHINGTON.)

OAKLAND, CAL.

SACRAMENTO SEMINARY.

SACRAMENTO, CAL.

The Sixteenth annual session of this Institution commences Monday, August 5th, 1878. Young ladies will here find superior facilities for a thorough and finished education, and a home of culture and refinement. The music will be under the direction of Prof. John P. Morgan, founder of the Musical Conservatory of Oakland. For further particulars address,

MRS. HERMON PERRY, Principal.

HEMORRHOIDS OR PILES,

A treatise on their scientific treatment and radical cure, by E. J. FRAZER, M. D., San Francisco. Price, 25 cents; for sale at the bookstores and by the author at 221 Powell street. Sent by mail to any address on receipt of the price in coin, currency or postage stamps.

TO FRUIT GROWERS.

DIXIE FRUIT PICKER. Patented, 1877. Sent by mail for 50 Cents. Address, M. H. DELANO, San Leandro, California.

A Cold Bleach on Hops.

Something of a sensation has been launched upon the hop horizon of central New York, by the announcement of success with a new process of securing the desirable color upon the hops in the drying house. It is claimed that the usual practice of applying the sulphur fumes at the same time as the drying heat, results in a very variable color in the product, as some of the hops being treated by heat become too dry to be affected by the sulphur, and some are not. The report is that Mr. C. B. Terry of Waterville, New York, one of the leading hop-pers of that region, has succeeded in doing away with this element of uncertainty in bleaching, by applying the sulphur fumes before the drying heat is introduced. The *Utica Herald* has given considerable attention to Mr. Terry's experiments and the results therefrom, and from this source we shall draw a brief statement of the method of the cold bleach, and the verdict pronounced in its favor by hop handlers. Mr. Terry gives his discoveries to the public for whatever they may be worth, and it may be that some of our hop growers will be interested to follow his method in an experimental way this year, in order to assure themselves of its value or lack of it. This is the new process in all its simplicity. After the hops are placed in the kiln for drying, and before the fires were lighted he burned fifteen pounds of sulphur under them in an iron pan, upon a kerosene oil stove. Thus only heat enough was secured to vaporize the sulphur, and the fumes passing into the mass of cold hops above, bleached them uniformly, because the natural moisture of the fresh hop took the sulphur evenly, and an even color was secured throughout the kiln. After this the fires were lighted, and the hops dried in the usual way. The "cold sulphur bleach," in the case described as a test, was applied for two hours. The success of this process is facilitated by a double cowl system of ventilation, as thus the greater draught of air is secured through the hops. Local reports assure us that the central New York hop growers are unanimous in favor of the new process of bleaching, as they have visited the kilns where it is in vogue, and contrasted the cold with the hot application of sulphur. They see a chance to gain in the speed of drying, because, by the new process, the hops may be left upon the vines until ripe, then given a uniform golden color and silky feel by the cold sulphur, and afterward dried more quickly than hops picked for the old style of bleaching. We read also that hops bleached by the new system have been sent to New York and pronounced of exactly the right color for export. It is also claimed that the application of sulphur fumes while the hops are at their natural temperature, does not harden the lupuline and weaken the hop as the old style of bleaching often does.

This is in brief the plan upon which New York growers are now confident of sending the hops to market in more even and acceptable color. We describe it that the growers on this coast may be aware of the proposed change in methods of bleaching, and if any of them deem it wise to experiment with the method proposed, we hope they will inform us of the results they reach whether satisfactory or otherwise.

Anti-Debris Association.

A correspondent of the *Record Union* at Yuba City writes as follows: An invitation having previously been given to the citizens of Yuba and Sutter counties, a large and enthusiastic meeting was held at the Court-house in Yuba City at 1 o'clock p. m., Saturday, August 24th. The purpose of the meeting was to consider the best means to be adopted whereby the impending destruction of the agricultural interests by hydraulic mining may be averted, and to better unite all our farmers in one common cause in their demands for protection.

The meeting was called to order by J. H. Keyes. George Oleyer was elected chairman and B. F. Watson, secretary. The Chair stated the objects of the meeting to be as already set forth, and urged determined and united action by all the agriculturists, in order to get an early and final decision by our Courts of last resort, settling forever the rights of the miners, whether they can use the rivers and farms as dumps for their debris.

Mr. Keyes addressed the meeting, setting forth in forcible language the great need of a more thorough organization of the farmers of the whole Sacramento valley, and at Sacramento, Marysville, and other cities and towns that are threatened with destruction. He submitted

a plan for organization, which was well received.

Hon. C. P. Berry then took the floor, and addressed the meeting at considerable length on the same subject, showing the great necessity of a closer union of the great agricultural and commercial interests of this State; that without this union we would surely all be covered by this lava of mud and sand. The speaker showed how thoroughly the hydraulic miners were united, that their organization extended the entire length of the State, that when one mine or company is attacked in the Courts the expense of litigation is borne by all of them in proportion to their value. That the capital arrayed against us is immense, reaching into the millions. And to successfully combat this great combination, it is absolutely necessary to unite and organize the agriculturists, to the end that this question or conflict may be determined on its merits.

S. R. Chandler, Jonas Marcuse, J. D. Wilber, Dr. Durst of Wheatland, S. D. Wood and J. M. C. Jasper of Yuba county, S. E. Wilson, Eli Davis, Thomas Brophy of Sutter, and others successively addressed the meeting, and with one accord all agreed with the first speakers.

A motion was then made and seconded that we form ourselves into an organization, to be called "The Anti-Debris Association of the Sacramento Valley." After considerable discussion, the motion was enthusiastically adopted without a dissenting voice. After this vote articles of agreement were considered by which this society shall be governed. After adopting one or two, and evening coming on, it was found impossible to finish the labors of the meeting. Whereupon the meeting adjourned to meet next Saturday, August 31st, at 10 o'clock A. M., at the same place, to complete the organization.

At the meeting on August 31st, articles of agreement were adopted, bidding the members to prosecute to final adjudication in the court of last resort any case now pending or that may hereafter be instituted for the purpose of determining the right of miners to use channels of rivers and their tributaries as places of deposit for debris, thereby destroying large bodies of valley land, etc. The agreement also provides that members shall sign with an amount and agree to stand an assessment not exceeding three per cent. on said amount, for the purpose named. An assessable valuation of about \$170,000 was subscribed at the meeting. The following named were elected Directors: James H. Keyes, B. F. Walton, C. P. Berry, S. E. Wilson and H. Elmer. George Oleyer was elected Treasurer. The Directors organized by electing Keyes president and Walton secretary. The meeting adjourned until September 14th, at 1 o'clock.

FOOTHILL FRUIT AT THE FAIR.—Messrs. C. M. Silva & Son of New Castle, Placer county are doing much to show the quality of foothill fruit by the specimens they are sending to the *Journal of Commerce* exhibit at the Mechanics' Fair. The last invoice was of peaches and plums, all choice varieties and finely grown. The precocity of fruit trees in favored locations in this State is shown by the samples of "Piquets" and "Wilkins" peaches which were produced on trees one year from bud in the nursery, and some of them not two feet in height.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING AUGUST 20TH, 1878.
RATCHET WRENCHES—Thos. Clement Hammond, Sacramento, Cal.
GRIPPERS FOR WIRE ROPE RAILWAYS.—Johan Hansen, S. F.
PROCESS FOR WELDING COPPER—R. P. Williams and L. Worsham, Alameda, Cal.
MINING RIFLES—Chas. O. Bagley, S. F.
RAILWAY RAIL JOINTS—Samuel E. Hilliard, Reno, Nev.
BLIND-WORKING MACHINES—Carl Hinz, S. F.
BERRY BOXES—Roswell E. Morey and Thomas H. McDonald, S. F.
HARNESSE SADDLES—John Patten, Tomales, Cal.
METALLIC WHEELBARROWS—John Upstone, S. F.
STEAM PUMPS—Philip Van Tassel and Martin Paup, Port Madison, W. T.
WASHING MACHINES—Toliver A. Wilson, S. F.
DEVICE FOR DRIVING NAILS UNDER WATER—William Stack, Oakland, Cal.
TRADE-MARKS—California Cigar Box Co., S. F., cigars

Woodward's Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a box-constructor have just been added. New stars are constantly engaged for the Pavilion exercises. Rates of admission as usual.

UNION READING ROOMS, FIRST STREET, SAN JOSE. WELCOME TO ALL!—Having lately been removed to the old hall of the City Zouaves, this institution is located in a pleasant and spacious apartment. The latest and best periodicals of the day are found on its tables, free to all. Also many choice volumes upon its shelves. Good music is provided for every Wednesday evening's social. Admission to these entertainments, 25 cents—to pay expenses.

WANTED, by a middle-aged woman of education, a position in a respectable farmer's family. Would make herself useful. Salary small. References. Address, INDUSTRY, office RURAL PRESS.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, September 4th, 1878.

The Wheat Market has shaded off a trifle during the week. The Grain is now coming in in large amounts, and the large wharf at Oakland has sustained a blockade. The shipments by sea during August were 45 cargoes, carrying 1,527,676 centals, valued at \$2,640,586. In August, 1877, the shipments were 7 cargoes, and in August, 1876, 28 cargoes.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday....	10s	3d@10s	6d	10s	5d@10s	9d
Friday.....	10s	2d@10s	6d	10s	5d@10s	9d
Saturday....	10s	2d@10s	6d	10s	5d@10s	9d
Sunday.....	10s	2d@10s	6d	10s	5d@10s	9d
Tuesday....	10s	2d@10s	6d	10s	5d@10s	9d
Wednesday..	10s	2d@10s	6d	10s	5d@10s	9d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1876.....	9s	5d@9s	8d	9s	8d@10s	—
1877.....	12s	6d@12s	8d	12s	9d@13s	2d
1878.....	10s	2d@10s	5d	10s	5d@10s	8d

The Foreign Review.

LONDON, Sept. 3d.—The *Mark Lane Express*, in its review of the corn trade for the past week, says: High temperature has prevailed the past week, but the weather has been unsettled. Harvesting, particularly in the north, is much delayed by rain; a considerable quantity of cereals has been cut, but not carried in. It is questionable whether very much damage has been done in the midland counties, although sprouting is feared should the weather continue warm and showery. A large quantity of wheat will doubtless be secured under favorable conditions, but farmers are in a hurry to thresh, judging by comparatively liberal offerings of new corn at country markets, samples showing unmistakable traces of deteriorated conditions of crops. Light, dry soils which suffered much from drought in July, may yield variously, but in general a heavy yield of cereals is anticipated. All that is now wanted is fine dry weather for ingathering. Root crops, Turnips especially, present a splendid appearance. The principal feature of the English Wheat trade has been the rapidity with which samples were marketed, in spite of the varied conditions in which they were threshed. Increased offerings and deteriorated quality have, in some instances, caused prices to recede. Imports of foreign Wheat into London have been very moderate, the bulk of heavy shipments of new Winter American having found its way to Liverpool rather than to London. The light supplies of this class of Grain which have arrived here are satisfactory in quality and condition.

Freights and Charters.

The *Call* says the recent accessions to the fleet of unengaged tonnage has weakened the freight market, and charters cannot be effected at over 42s for Wheat to Liverpool. There are now in port 70,558 tons shipping engaged for Wheat, 61,893 disengaged, and 12,348 tons loading General Merchandise. On the way to this port, so far as known, 170,000 tons.

Eastern Grain Reports and Markets.

MILWAUKEE, Sept. 2d.—A commission firm has reliable reports from the Northwestern States showing that the Barley crop has been seriously injured, and that there will be no No. 2, on account of wet weather during the harvest.

NEW YORK, Aug. 31st.—Exports of Winter Wheat to France and other parts of the Continent have again been very large, calling into requisition a large amount of tonnage. Sales of Wheat for the week closely approximate 5,000,000 bushels, mostly for foreign account, but an advance of 2c or 3c per bushel in price toward the close, without a corresponding improvement abroad, served to check outward business and cause a weaker feeling in the freight market. Nearly, or quite 100 vessels, including a number of large English steamers, have been chartered during the week to load Grain here, at Philadelphia and Baltimore, though nearly all at New York, at 5s 3d to 6s 9d per quarter, for various ports of Europe. These vessels have a capacity for some 4,000,000 bushels. English shippers are contracting for new Spring Wheat for September, at \$1.05@1.07. The quantity of old crop being very light, it is worth 8c to 10c more than new, but sells only for milling purposes at those figures. Winter Wheat was sold at from \$1.02 to 1.20, the latter price for very handsome white.

CHICAGO, Aug. 31st.—The Grain market has been rather steady, but with an easier tendency and prices averaging lower. The speculative demand has been good and the figures have been nearer their proper and nominal rates than for many months past. Winter Wheat continues to arrive freely and there is a large business in that grain; sales for September, \$9@91½c. Corn was weak, lower and pretty dull throughout;

sales for September, 37@38½c. Oats weak and down to the lowest price for many years; sales for September at 21@21½c. Rye, 47@48c, for cash. Barley heavy; sales for September, 78c @ \$1.06. Provisions are unsettled, with wide fluctuations and a fair business. Pork, \$9.12½ @ 9.60, for September; Lard, for September, \$7.02½@7.22½. Whiskey is steady at \$7. Closing cash prices. Wheat, 89½@89¾c; Corn, 36¾c; Oats, 20½c; Rye, 47c; Barley, \$1.05@1.06c; Pork, \$9.40; Lard, \$7.07½.

Eastern Wool Markets.

NEW YORK, Aug. 31st.—There is but little change to notice in the condition of the Wool market. The current demand runs chiefly on medium grade, but the supply of these is small and held by a few, consequently there is little urgency to place stock of this description. Spring California is still in light supply, and though perhaps a shade easier than a week since, is now quoted steady. Holders of Texas also show a firmer disposition. Further telegraphic advices from London, report "Bidding spirited." The sales for the week are 10,000 lbs Mexican at 14c; 65,000 lbs Spring California, 21c@27c; 50,000 lbs Colorado, 13@16c; 8,000 lbs Eastern Oregon, 24c; 20,000 lbs Western Texas, 18@20c; 50 bags Spring do, 23c; 112,000 lbs N and above, Ohio, 36@38c; 20,000 lbs No. 1 do, 38@39c; 15,000 lbs Combing and Delaine, 3 and ½ blood, 45@46c; 7,500 lbs do, ½ blood, 38@40c; 5,000 lbs unwashed do, 27@30c; 10,500 lbs medium unwashed Ohio and Pennsylvania, 27c; 1,500 lbs lambs' pulled, 37½c.

BOSTON, Aug. 31st.—There was a fair business done in Wool the past week, but prices settled down on a lower basis, and the market is still more unsettled so far as prices of clothing Wool are concerned. Combing and Delaine remains unchanged, and transactions in this grade are limited only by the amount offering, as most holders are sold up close. Fleece Wool is now low enough to attract the attention of buyers, but manufacturers are still quite indifferent and do not take hold with any confidence. It would be difficult to place XX Ohio and Pennsylvania Fleece above 35c, and good average lots of Michigan at over 32c. Medium grade Fleece are most inquired for. Quite an export movement has started up in foreign Wool, shipments to England this week comprising 16,168 lbs of Cape, purchased at 16c, gold, in bond. Sales comprise Ohio X, XX and above at 35@39c; Michigan X and medium, 32@35c; Maine medium, 36c; Wisconsin medium, 34c; New Hampshire, 34c; Combing and Delaine, 37@43c; Texas, 17@28c; Territory, 15½@25c; Missouri, 24c; Eastern Oregon, 20@25c; scored, 36@60c; super and X pulled, 29@35c; Spring California, 18½@29½c; Fall do, 16½@18c. Total sales of domestic for the week, 1,280,200 lbs.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Aug. 14.	WEEK. Aug. 21.	WEEK. Aug. 28.	WEEK. Sept. 4.
Flour, quartersacks.....	33,746	64,333	40,131	45,920
Wheat, centals.....	388,612	300,177	303,016	440,053
Barley, centals.....	30,983	62,395	44,631	61,355
Beans, sacks.....	130	350	437	1,832
Corn, centals.....	539	556	2,004	632
Oats, centals.....	11,902	7,121	3,462	5,739
Potatoes, sacks.....	8,375	12,338	8,859	10,741
Onions, sacks.....	1,123	877	991	1,207
Wool, bales.....	2,755	2,519	1,156	4,208
Hops, bales.....	—	—	45	191
Hay, bales.....	2,579	2,389	2,835	2,348

BAGS—The combination screws are being turned up sharply on Grain Bags, and the price for standard Wheat Bags is now put at 13½c. Machine sewed are held at 13½c. There are other slight changes in our quotations below.

BARLEY—Barley is doing finely, both Feed and Brewing for export. We note sales: 750 bags Bay Brewing at \$1.20 (for export to Liverpool); 800 do at \$1.17½; 500 bright Coast at \$1.06½; 300 common Bay and 400 good Coast at \$1.05; 200 Coast at \$1.02½; 400 do at \$1; 200 very dark Coast at 97½; 900 bags bright Coast, \$1.07½; 717 at 1.05; and 131 Chevalier, dark and smutty, at \$1; 300 sks good Brewing at \$1.17½; 300 fair do at \$1.13½; 700 Coast Feed at \$1.05; 250, 180, 335 and 400 do at \$1; 100 do at \$1.02½ per ctl. The ship Three Brothers, for New York, will take about 3,000 tons. Barley is also going out to Australia and New Zealand, to British Columbia, Peru and to England.

BEANS—The incoming of considerable quantities of new Beans has knocked the bottom out of prices, which in the case of Pink Beans have declined nearly one-half. We note sales of 40 sks Pink at \$2.50 per ctl. Bayos are now \$4.50, and other kinds are nominal, in lack of sales.

CORN—Prices are unchanged. We note sales: 200 bags Eastern Yellow, \$1.80 per ctl; small sales large Yellow at \$1.80; and small do at \$1.75@2 per ctl. White Corn now ranks lower than Yellow.

OATS—Oats are selling within former range. We note sales: 500 bags good California Feed sold at \$1.42½; 200 at \$1.45; 80 do at \$1.40, and a lot of choice do at \$1.55; 300 and 163 good California Feed at \$1.50; 1,000 Southern Coast at \$1.25; 200 bags common California sold at \$1.27½ per ctl.

ONIONS—There is a general advance of 12½c per ctl on all good kinds.

POTATOES—Cuffey Cove Potatoes are now coming in and bringing \$1.25@1.37½. Early Rose are a shade lower.

PROVISIONS—There is no change save a fractional advance in some of the imported Hams.

VEGETABLES—Cucumbers, Summer Squash and Tomatoes are cheaper. Tomatoes are now selling at the rate of 5 to 10 lbs for 1c at wholesale. A 50-lb box sometimes sells for 10c, of which 9c goes to pay freight, cartage, etc., in the city.

WHEAT—Prices to-day are 2½c per cwt lower than this day last week. We note sales at different days during the week as follows: 8,000 cwt choice Milling at \$1.80½, and 5,500 bags choice Proper to a shipper at \$1.80; 1,200 cwt do, to arrive, at \$1.80; 2,000, 2,000, 1,100, 400 good Shipping at \$1.75; 4,000 sds good Oregon at \$1.73; 800 cwt fine Shipping at \$1.72½; 1,400 common at \$1.70; 1,500 do Coast at \$1.67½; 2,000 choice Australian, to a miller, at \$1.77½; 2,500 good Shipping and 1,600 choice Proper, at \$1.77½; 3,700 bags and 3,000 and 1,000 cwt good Shipping at \$1.75; 800 common at \$1.72½; 600 cwt choice Milling at \$1.80; 400, 200 and 1,400 fair Shipping at \$1.75, and 1,000 pinched at \$1.50; 5,000 cwt Walla Walla sold on the wharf at \$1.72½ per cwt.

DAIRY PRODUCE—Prices are without variation, and the trade moving quietly.

EGGS—Eggs are unchanged. Some Eastern Eggs coming in by express sell at 30c.

FEED—A shading off of 50c per ton on choice Wheat is the only change. We note sales: Cargo of good Wild Oat sold at \$11.50, and one of good Stable at \$9.50; alfalfa quoted at \$9 per ton; 40 tons fair Cow sold at \$8 and 20 tons fair Stable at \$8.25 per ton.

FRESH MEAT—The only change is a cheapening of Lamb.

FRUIT—Prices are without material change. Mountain Peaches are coming and claiming the fancy rates. Blackberries and Strawberries have improved a little.

HOPS—Receipts of the new crop are coming in and the quality is very good. Receivers report no sales as yet. Emmet Wells reports the New York trade, for the week ending August 23d, as follows: There is no change in prices. There is some inquiry for new Hops, of which only a few bales have arrived. Picking will be general on September 2d. Our latest information from the country in relation to the crop are reported (with the exception of Wisconsin and Pacific Coast) to be fully as large, if not larger, than was estimated early in the season. Some place the crop at one-half, others at two-thirds of last year's yield. The reports from Germany are for a larger yield than was previously estimated.

LIVE STOCK—We note sales: 500 Sheep, at \$2.50 per head; 120 Cattle, \$25 per head; 280 do, \$30 per head; 200 Lambs, \$1.50 each, all gold.

WOOL—Fall Wool is arriving more freely, but sales are not yet sufficient to define prices fully. Different ranges are given by different dealers. One house reports sales of 5,000 lbs Northern free, Fall at 16c; 18,008 lbs, do 19c; 10,000 lbs Fall burry at 10c. Another house reports 50,000 lbs Fall Wool, sold at 12c 13c ½ lb, and gives the following quotations for Fall Wool: 9c 11c for burry; 11c 13c for San Joaquin, and 13c 15c for Northern free. Another week will doubtless make the market more definite.

FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., September 4, 1878.

FRUIT MARKET.	
Apples, box....	75 @ 100
do Cooking....	25 @ 50
Bananas, bunch....	3 00 @ 4 00
Blackberries, chst 30 @ 40	
Cocoanuts, 100....	4 00 @ 5 00
Figs, lb....	3 @ 4
Grapes, bunch....	25 @ 40
Grapes, Mus't, do 60 @ 75	
Limes, Mex....	7 00 @ 8 00
do, Cal, per M....	— @ —
Lemons, Cal M....	— @ —
Sicily, box....	— @ 12 00
Mangoes, 100....	4 00 @ —
Oranges, Mex....	— @ —
Tahiti....	— @ 25 00
Cal....	— @ —
Peaches, bsk....	75 @ 1 25
do Mountain, 1 50 @ 2 25	
Pears, box....	25 @ 40
do, Bartlett....	85 @ 1 00
Plum apples, doz....	5 00 @ 6 00
Plums, lb....	1 @ 3
Prunes, lb....	2 @ 4
Quinces, bsk....	75 @ 1 00
Raspberries, lb....	— @ —
Strawberries, chst 2 50 @ 5 00	
DRIED FRUIT.	
Apples, lb....	5 @ 7½
do new....	9 @ —
Apricots....	15 @ —
Citron....	23 @ 24½
Dates....	9 @ 10
Figs, Black....	4 @ 7
VEGETABLES.	
Beets, ct....	50 @ —
Beans, String....	2 @ 2½
Cabbage, 100 lbs....	40 @ 50
Cal....	— @ —
Cantaloupes, case 50 @ 3 00	
Carrots, ct....	40 @ 50
Cauliflower, doz 50 @ 75	
Cucumbers, h....	25 @ 40
do, Bartlett....	85 @ 1 00
Green Corn, doz....	2 @ 7
Green Peas....	2 @ 2
Lettuce, doz....	10 @ —
Parasols, lb....	2 @ —
Horseradish....	7 @ 8
Rhubarb....	1 @ —
Squash, Marrow fat, lb....	5 00 @ —
Summer do, bx....	25 @ —
Tomato, 50 lbs bx....	10 @ 20
Turnips, ct....	5 @ —
White....	50 @ —
Watr'm's, 100....	5 00 @ 8 00

LUMBER.

WEDNESDAY M., September 4, 1878.

CARGO PRICES OFFUGET SOUND PINE.	
REDWOOD.	RETAIL PRICE.
Rough M....	13 00
Refuse....	9 00
Clear....	23 00
Clear Refuse....	13 00
Rustic....	23 50
Refuse....	18 00
Surfaced....	20 00
Refuse....	14 00
Flooring....	20 00
Refuse....	12 00
Beaded Flooring....	23 00
Refuse....	13 00
Half-inch Siding....	16 00
Refuse....	14 00
Half-inch Surfaced....	20 00
Refuse....	14 00
Half-inch Battens....	18 00
Pickets, Rough....	11 00
Rough, Pointed....	12 50
Fancy, Pointed....	15 00
Shingles....	1 75
REDWOOD.	
Rough M....	18 00
Clear....	23 00
Rustic....	23 50
Surfaced....	20 00
Flooring....	20 00
Beaded Flooring....	23 00
Half-inch Siding....	16 00
Half-inch Surfaced....	20 00
Half-inch Battens....	18 00
Rough, Pointed....	12 50
Shingles....	1 75

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., September 4, 1878.

BEANS & PEAS.	
Bayo, cwt....	4 50 @
Butter....	— @ —
Peas....	— @ —
Red....	— @ —
Pink....	2 50 @ 2 75
Sm'l White....	— @ —
Lima....	— @ —
Field Peas....	1 10 @
BROOM CORN.	
Old....	3½ @
New....	4½ @
CHICKEN.	
California....	4 @ 4½
German....	6½ @ 7
DAIRY PRODUCE, ETC.	
BUTTER.	
Cal. Fresh Roll, lb....	27½ @ 35
Fancy Brands....	— @ 35
Pickle Toll, new....	25 @ 27½
First old....	12 @ 16
Western....	14 @ 16
New York....	— @ —
CHEESE.	
Cheese, Cal., lb....	8 @ 12½
Eastern....	10 @ 12
N. Y. State....	— @ —
Gilroy Factory....	11 @ 13
CAL. FRESH, DOZ....	
Ducks....	37½ @ 40
Oregon....	30 @ 32½
Eastern....	18 @ 22
do by express....	30 @ —
do Pickled....	— @ —
FEED.	
Brn, ton....	— @ 16 00
Corn Meal....	42 00 @ 43 00
Hay....	7 00 @ 13 50
Middlings....	24 00 @ —
Oil Cake Meal....	34 00 @ —
Straw, bale....	25 @ 60
FLOUR.	
Extra, bbl....	5 12½ @ 5 75
Superfine....	4 25 @ 4 50
Graham, lb....	3 @ 3½
FRESH MEAT.	
Beef, 1st qual'y, lb....	5 @ 6
Second....	4 @ 4
Third....	2½ @ 3½
Mutton....	4 @ 5
Spring Lamb....	5½ @ 6
Pork, dressed....	4½ @ 5
Dressed....	6 @ 7
Veal....	6 @ 8
Milk Calves....	8 @ 9½
do choice....	10 @ —
GRAIN, ETC.	
Barley, feed, cwt....	15 @ 12½
Brewing....	15 @ 25
Chevalier....	175 @ 90
Buckwheat....	175 @ —
Corn, White....	175 @ —
Yellow....	80 @ 90
Small Round....	2 00 @ 2 05
Oats....	1 25 @ 1 50
Milling....	1 55 @ 1 75
Rye....	17 @ 20
Wheat, Shipping....	175 @ 75
Milling....	175 @ 75
Off Grades....	140 @ 60
HIDES.	
Hides, dry....	15½ @ 16
Wet salted....	7½ @ 9
HONEY, ETC.	
Bee wax, lb....	30 @ 31
Honey in comb....	11 @ —
do, No 2....	8 @ 9
Dark....	8 @ 9
Strained....	5 @ 5½
HOPS.	
Oregon....	3 @ 5
California....	4 @ 7
Wash. Ter....	4 @ 6
NITS—Jobbing.	
Walnuts, Cal....	8 @ 9
do Chile....	7 @ 8
Almonds, hd sh lb....	7 @ 8
Soft sh....	14 @ 16

LEATHER.

[WHOLESALE.]

WEDNESDAY M., September 4, 1878.

Sole Leather, heavy, lb....	22 @ 29
Light....	20 @ 24
Jodot, 8 Kil, doz....	48 @ 50
11 to 13 Kil....	65 @ 70
14 to 19 Kil....	80 @ 90
Second Choice, 11 to 16 Kil....	55 @ 60
Cornellian, 12 to 16 Kil....	57 @ 67
Females, 12 to 13 Kil....	63 @ 67
14 to 16 Kil....	71 @ 76
Simon Ulmo, Females, 12 to 13 Kil....	58 @ 62
14 to 15 Kil....	66 @ 70
16 to 17 Kil....	72 @ 74
Simon, 18 Kil....	61 @ 63
20 Kil....	65 @ 67
24 Kil....	72 @ 74
Robert Calif, 7 and 9 Kil....	35 @ 40
Kips, French, lb....	1 @ 1 35
Cal, doz....	40 @ 60
French Sheep, all colors....	8 00 @ 15 00
Eastern Calf for Backs, lb....	1 00 @ 1 25
Sheep Roams for Topping, all colors, doz....	9 00 @ 13 00
For Linings....	5 50 @ 10 50
Cal. Russet Sheep Linings....	1 75 @ 4 50
Boot Legs, French Calf, pair....	4 00 @ —
Good French Calf....	4 00 @ 4 75
Best Jodot Calf....	5 00 @ 5 25
Leather, Harness, lb....	35 @ 38
Fair Bridle, doz....	48 @ 72
Skirting, lb, doz....	33 @ 37
Welt, doz....	30 @ 50
Buff, ft....	18 @ 20
Wax Side....	17 @ 18

Gold, Legal Tenders, Exchange, Etc

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, September 4, 3 P. M.

LEGAL TENDERS in S. F. 11 A. M., 99½ @ 99.90. SILVER, 1½ @ 2 GOLD in New York, 100.
GOLD BARS, 800 @ 910. SILVER BARS, 8 @ 15 ½ cent. discount.
EXCHANGE on New York, 1½; on London bankers, 49 @ 49½.
Commercial, 50; Paris, five francs \$ dollar; Mexican dollars, 91 @ 93.
LONDON Consols, 94 11-16; Bonds, 108½.
QUICKSILVER in S. F., by the flask, ¾ lb, 43 @ 45c.

Signal Service Meteorological Report.

Week Ending September 3, 1878.

HIGHEST AND LOWEST BAROMETER.						
Aug 28	Aug 29	Aug 30	Aug 31	Sept 1	Sept 2	Sept 3
30.06	30.03	29.90	29.95	30.02	30.04	29.95
30.00	29.91	29.81	29.85	29.97	29.95	29.85
MAXIMUM AND MINIMUM THERMOMETER.						
65	65	73	65	62	64	75
56	55	56	53	54	56	55
MEAN DAILY HUMIDITY.						
77	83	75	83	82	81	66
PREVAILING WIND.						
SW	SW	SW	SW	SW	SW	SW
WIND—MILES TRAVELED.						
263	204	210	335	296	245	238
STATE OF WEATHER.						
Cloudy	Fair	Clear	Fair	Cloudy	Fair	Clear
RAINFALL IN TWENTY-FOUR HOURS.						
Total rain during the season, from July 1, 1878, .01 in.						

Buhach, or California Insect Powder.

EDITORS PRESS:—As the leading agricultural journal of the Pacific Coast, I believe the RURAL PRESS must feel interested in every new industry, and especially in such as effect a saving in the products of the soil, by the destruction of insects hurtful to vegetation, or increase the comfort of man and all the domestic animals by the extermination of their parasites. This is eminently the case in respect to the powder of Buhach, grown and manufactured by G. N. Milco, of this city, and newly introduced to the notice of the public.

I have been annoyed for years by swarms of cockroaches infesting my kitchen, and have used immense quantities of imported powders in attempts to destroy them, but without effect. Very recently I was induced to try Milco's Buhach, and was agreeably surprised to find them utterly exterminated.

I consider it one of the most wonderful and useful discoveries of the age, and that Mr. Milco is entitled to the thanks and gratitude of all humanity. I hope the people of this State will use and test it, as I have done, and they will need no other assurance that it is the only reliable insect exterminator now in use; and also hope that the proprietor of this inestimable powder will reap a reward commensurate with the benefits he has conferred upon the human race.

JOHN HENDERSON,

Proprietor of the Central Hotel.
Stockton, California.

EVERY new subscriber who does not receive the paper and every old subscriber not credited on the label within two weeks after paying for this paper, should write personally to the publishers without delay, to secure proper credit. This is necessary to protect us and subscribers against the acts and mistakes of others.

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Pocket Map of California and Nevada.

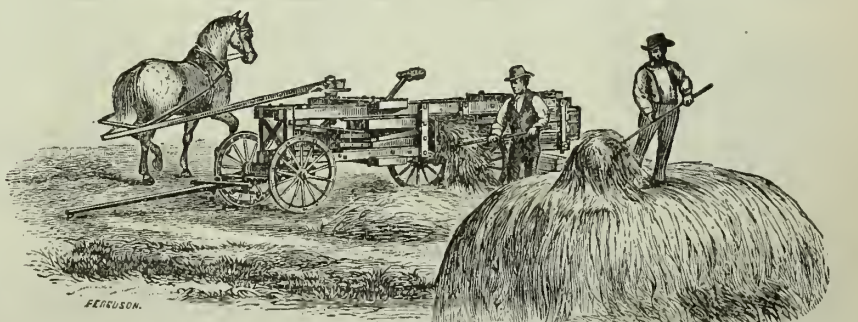
Compiled from the latest authentic sources, by Chas. Drayton Gibbs, C. E. This map comprises information obtained from the U. S. Coast and Land, Whitney's State Geological, and Railroad Surveys; and from the results of explorations made by R. S. Williamson, U. S. A., Henry Degroot, C. D. Gibbs and others. The scale is 18 miles to 1 inch. It gives the Judicial and U. S. Land Districts. It distinguishes the Townships and their subdivisions; the County Seats; the Military Posts; the Railroads built and proposed, and the limits of some of them; the occurrence of gold, silver, copper, quicksilver, tin, coal and oil. It has a section showing the heights of the principal mountains. The boundaries are clear and unmistakable, and the print good. 1878. Sold by DEWEY & CO., Price, postpaid, \$2; to subscribers of this journal, until further notice, \$1.

The Mining & Scientific Press,

is the leading mining journal in America, and it enjoys a large circulation among the more intelligent operators and workers in the gold fields of the world. As a scientific and mechanical representative of the Pacific Coast it is decidedly popular, and is a standard journal with the most thrifty industrial people of the Pacific States and Territories. Its authority is of the highest order, and its usefulness in its special sphere unrivaled. Every public library, mining engineer, metallurgist, mining operator and intelligent mechanic and manufacturer will find profit by its reading. Subscription, postage prepaid, \$4 a year in advance. Sample copies, post paid, 10c.

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13,600 ACRES,

Between North Pacific Coast Railroad and Pacific Ocean, three hours travel by steamer and railroad from San Francisco.

Schooners make the trip to Drake's Bay in six hours, and to Tomales Bay in nine hours. Produce can be shipped to market from the colony by schooner as well as by rail.

Title—United States patent.

Climate—Unsurpassed for mildness and equability.

Soil—Without exception the richest on the coast.

Water—Abundant. A failure of crop has never been known.

Wood—Sufficient for fire and fencing.

Agriculture—The soil, climate and situation render this property particularly adapted to those who wish desirable homes at a short distance from San Francisco. With the exception of tropical fruits, anything that grows in California can be produced upon this land.

This rancho, famous for its dairies, is now being subdivided into 20, 40 and 80-acre farms, under the auspices of the California Immigrant Union, and will be sold at low figures.

TERMS—One-fourth cash; balance in one, two and three years, with interest at eight per cent. per annum on deferred payments.

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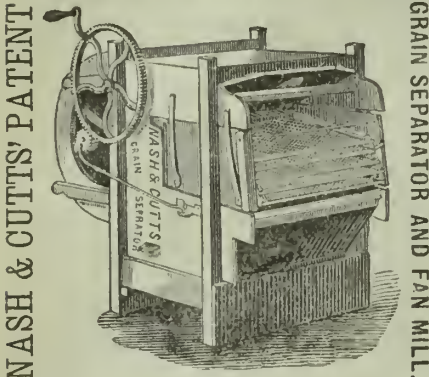
Parties desiring to visit the tract will be provided with tickets upon application as above.

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Agricultural Articles.

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Nash & Cutts' Machine will thoroughly separate Mustard Seed, Cheat, Barley, Oats, Cracked Wheat, etc., from Wheat in a rapid and satisfactory manner.

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Clean Faster, Better, and with Less Work and Trouble.

Than any other machine now in use.

The Nash & Cutts' Machine is the only one that will clean Alfalfa Seed. All we ask of any one in want of a Grain Separator is to give the Nash & Cutts' a trial.

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For further particulars address

NASH & KLEES, No. 261 K Street, Sacramento, Cal.

Only manufacturers of the Nash & Cutts' Grain Separator for the Pacific Coast.

BAKER & HAMILTON, Sole Agents, San Francisco and Sacramento.

The Famous "Enterprise"

(PERKINS' PATENT Self Regulating

WINDMILLS, Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in ball-bitted boxes.

Positively self regulating, with no coiled spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

To Threshers.

Hold Your Bags

Save MONEY!!

FILL THEM FULL.

Shake Them Down.

HOW? USE THE

"CALIFORNIA SACKHOLDER."

Simple, Cheap.

Adjustable to any Sized Bag.

LONG,

SHORT,

WIDE,

Or Narrow.

Completest Device Ever Invented

and Lasts a Lifetime.

Discount to the trade. General Agency for the Pacific Coast,

H. M. COVERT,

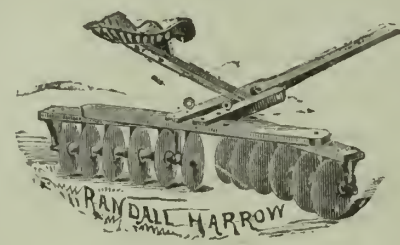
No. 306 Davis Street, San Francisco

BAKER & HAMILTON,

San Francisco and Sacramento.

The Randall Pulverizing Harrow.

A COMPLETE SUCCESS.



OVER 10,000 IN USE.

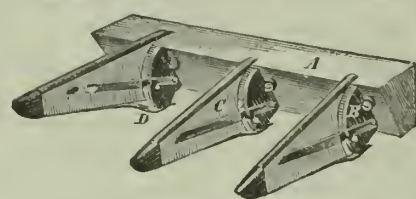
Local agents wanted. Descriptive circulars and Price list free on application.

Address, CLAUDE V. BURKE, Sole Agent.

Yolo, Yolo County, Cal

BONNEY'S PATENT

Adjustable Grain Lifter for Headers.



All farmers who wish to save grain without waste in cutting, should examine these. They can be run at any inclination to the ground, as seen at D in cut. Are light, strong and durable, and can be adjusted in 15 minutes, or removed in five when not required, by drawing bolt in malleable shank B. Set of 8 for 10-foot header, (in putting on which bore with 1/2-inch bit for lag screws) are the cheapest and give the best satisfaction of any in use. Parties can save additional cost of a set in one day's cutting, where grain is lodged or trickles down. Price, \$10. Also, Grain Belts, Header Sticks, etc. Manufactured for

BAKER & HAMILTON, San Francisco and Sacramento, Sole Agents, Pacific Coast.

MATTESON & WILLIAMSON'S

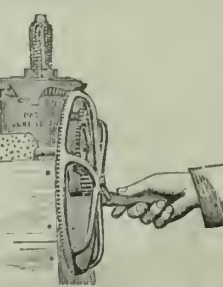


Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON, STOCKTON, CAL.

Peerless Corn Sheller.



It is so cheap (costing only \$8), that almost any one can afford to buy one. It is so rapid, it will shell almost as fast as a \$40 machine, and seven or eight bushels per hour is not above its capacity. It weighs only 13 pounds and is simple and durable. For particulars, address

WEISTER & CO. 17 New Montgomery St., S. F.

CALIFORNIA FRUIT DRIER

Awarded the

CALIFORNIA GOLD MEDAL

AND THE

U. S. Centennial Grand Medal & Diploma

IT IS THE

BEST FRUIT DRIER,

And the only one that proves a success in making the FINEST RAISINS, FIGS, and the Choicest Fruit at the least expense.

Driers of all sizes put up and no pay asked until tested.

GEO. A. DEITZ, Manager,

SACRAMENTO, CAL.

Nurserymen.

SHINN'S NURSERIES.

NILES, ALAMEDA COUNTY, CAL.

We invite attention to our large stock of

Fruit Trees and Ornamentals,

Of the most approved varieties. Also, Coffee, Cork Oak, Olives, Guavas, English and Black Walnuts, Magnolias, Loquats, Butternuts, Small Fruits, Evergreens, Etc. We have a choice stock of the Diospyros Kaki (Japanese Persimmon), of our own growing, and also, grafted stock imported direct from several Japan Nurseries. Address for catalogue and terms,

DR. J. W. CLARK, No. 418 California St., San Francisco, Or JAMES SHINN, Niles, Alameda Co., Cal.

ESTABLISHED IN 1858.

PEPPER'S NURSERIES.

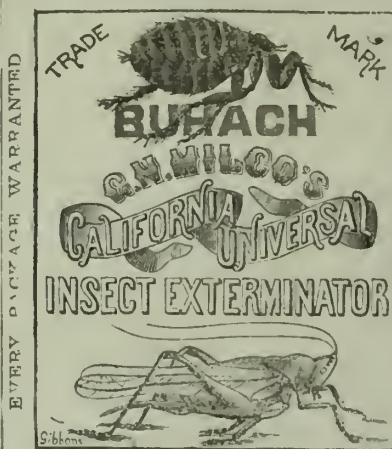
An unusually fine stock of trees is offered for sale at low market rates for reliable and healthy fruits. Also a general assortment of evergreen trees and shrubs, blue gums, Monterey cypress, etc., in boxes for hedge and forest planting.

My trees are grown in a sandy loam, without irrigation; can be no finer rooted trees grown; wood ripens early, and can be safely transplanted as soon as sufficient rain falls for lifting the stock. Early planting recommended. Catalogues with list of prices ready for distribution October 1st.

Address, W. H. PEPPER, Petaluma, Sonoma Co., Cal.

SHARPLESS STRAWBERRY

Raspberries, Blackberries, Fruit Trees, Vines and Plants. Send for catalogue to WM. PARRY, Cinnaminson, New Jersey.



This trade mark is registered by G. N. Milco, May 7th, 1878, in the Patent Office at Washington, D. C. The most wonderful discovery of the Nineteenth Century.

INSECT POWDER.

A California Production. Retail price, 25 cts. and 50 cts. per package. Directions for use with each package.

G. N. MILCO, Patentee and Sole Manufacturer, Stockton, California.

Ask your druggist and groceryman for it.

STEWART & BUCKLEY, Agents, 513 Sansome Street, San Francisco, Cal

GILBERT & MOORE,

Manufacturers of

School, Office, Church, Lodge and Household Furniture, Etc.

Sole Agents of Pacific Coast for the

Sterling School Furniture Company THE BEST IS THE CHEAPEST IN THE END.

"THE PEERLESS."



Unsurpassed for Elegance, Comfort and Durability.

Six sizes made, single and double. Send for our illustrated Catalogue and Price List. School supplies of all kinds in stock and to order. Good reliable agents wanted in every town on Coast.

We offer the best Desk as cheap as the poorest that can be bought.

GILBERT & MOORE, 219 Bush Street, San Francisco, Cal.

Chance in the Nursery Business.

There is a good chance in Tehama County for a skilled man who will go to work and start a nursery. The location is one mile from Vina station, in Tehama County, in a good growing region of country; the land is first-class and water abundant. A man is wanted, with good references, who will start a first-class nursery in partnership with the owner of the land. Address,

S. C. DICUS,

Vina Station, Tehama County, Cal

18 ELEGANT new style Chromo Cards, with name, 10c, postpaid. GEO. I. REED & Co., Nassau, N. Y.

Seedsmen.

SEEDS.

SEEDS.

IMPORTED.

Crosby's Extra Early Marblehead Mammoth Stowell's Evergreen Mexican Sweet, New } Sweet Corn.

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White Sugar

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco

R. J. TRUMBULL & CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGS, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

"Guide to the Vegetable and Flower Garden will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO., 419 and 421 Sansome Street, S. F.

SEEDS. TREES. SEEDS.

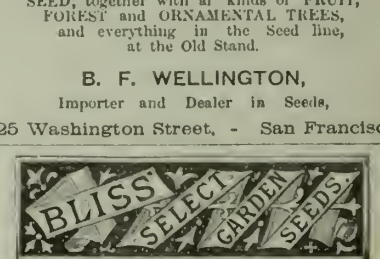
Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses.

RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON, Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.



B. K. BLISS & SONS,

Importers, Growers and Dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS & SONS, 34 Barclay Street, N. Y.

COFFEE SEED.

I will furnish a first-class article to parties desirous of planting. New crop will be ready about the middle of August, 1878. Sent by mail. Send for sample bag \$1 in U. S. stamps. Information on planting, etc., gratis.

H. COOPER, Kona, Hawaii, Sandwich Islands.

H. H. H. HORSE MEDICINE,

D. D. T.—1868.

As a horse medicine it is superior to any liniment ever invented. For RINOSOR, SPRAIN, SWEENEY, CALLOUS LUMPS, and all old sores, apply freely so as to blister, from three to five days in succession, and in four or five days, if not cured, repeat as at first. SPRAINS, STIFF JOINTS, BRUISES, WINDGALLS, and all slight ailments, apply a small quantity so as not to blister. Saddle Sores, Cuts, and all other sores where the skin is broken, mix the liniment half and half with any kind of oil, and apply in moderation.

WILLIAMS & MOORE, Proprietors, STOCKTON, CAL.

Calvert's Carbolic SHEEP WASH, \$2 Per Gallon.

After dipping the sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

TRADE MARK

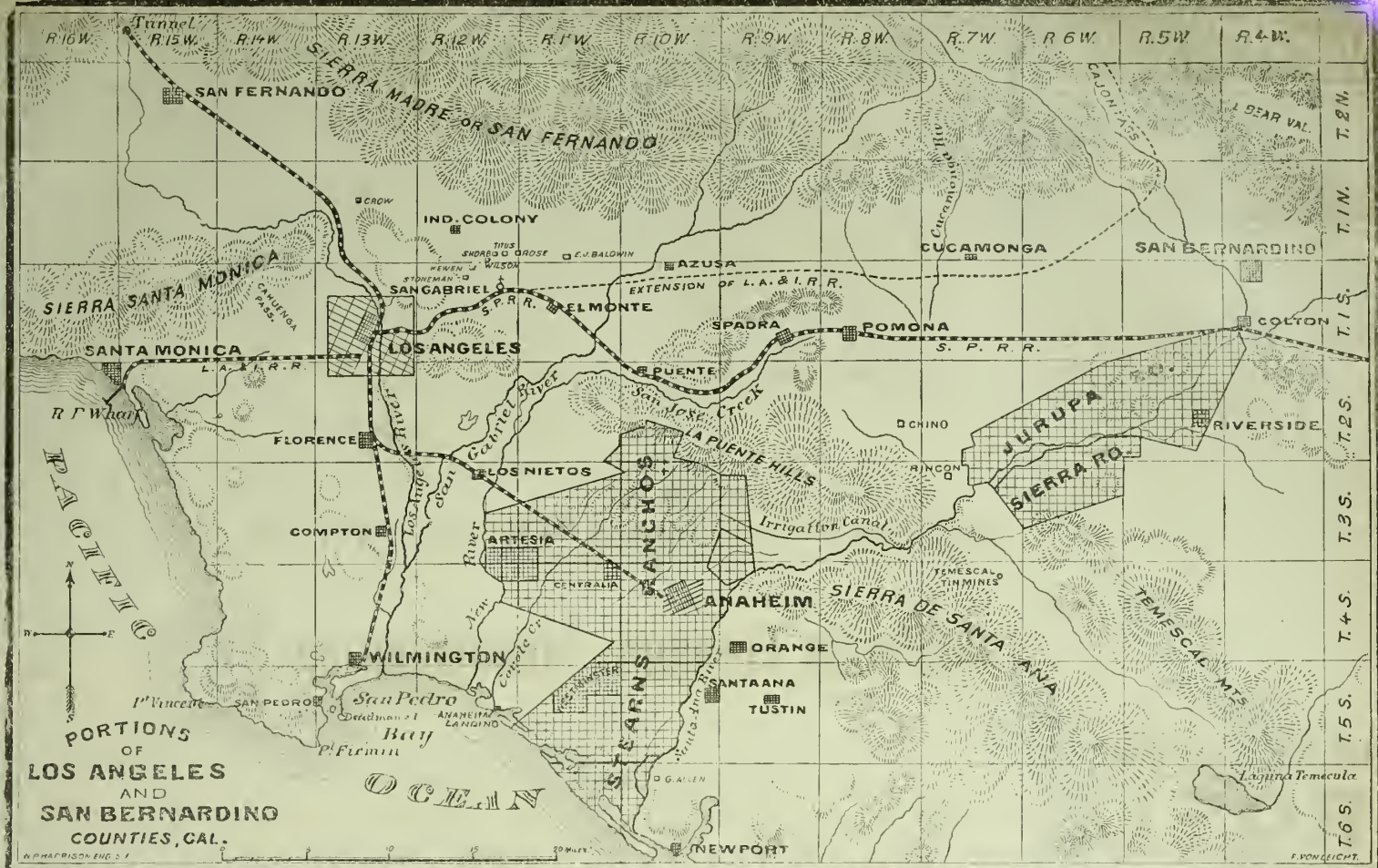
After dipping the sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

The Accompanying Map
shows the

"Abel Stearns" RANCHOS,"

The Center of Los Angeles
Valley.

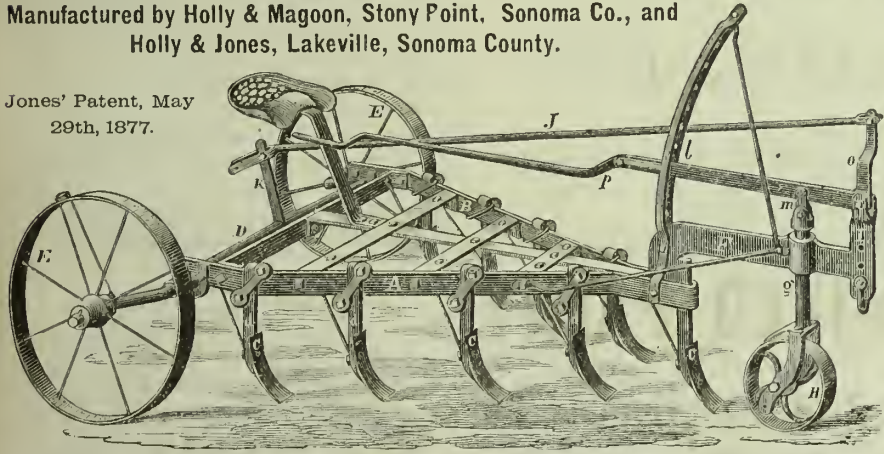
Six hundred Farms already sold and improved. Within the Artesian Well Belt, and having water near the surface. For sale in sections or fractions by ALFRED ROBINSON, Trustee, 120 Sutter street, near Montgomery, San Francisco, or apply to WM. R. OLDEN, Anaheim, Cal.; or, concerning the Colony, to REV. ROBERT STRONG, Westminster, Cal. Terms, one-fifth cash; balance, 1, 2 and 3 years. Interest at 10 per cent., payable at end of each year. The larger squares represent Townships six miles square, containing 36 sections. The smaller squares, within the STEARNS' RANCHOS, represent 160 acres. Roads are proposed to be laid out on every section line, forming blocks of one mile square, with roads on all sides and on many quarter section lines. SEND FOR CIRCULARS.



HOLLY & MACOON'S CULTIVATOR.

Manufactured by Holly & Magoon, Stony Point, Sonoma Co., and
Holly & Jones, Lakeville, Sonoma County.

Jones' Patent, May
29th, 1877.



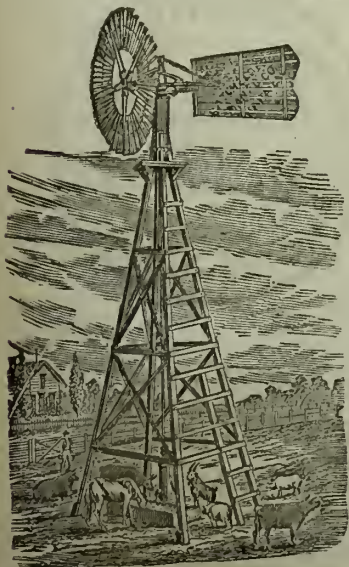
This Cultivator is made by practical men, after years of experience, and better meets the wants of California farmers than anything before offered.

Made of the best material (with wood or iron frame), and warranted in every respect.

Prices

REASONABLE.

For further information address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Francisco and Sacramento, Cal.



IF YOU WANT A

Wind Mill,

THE MOST POWERFUL AND THE NEAREST PERFECTION
OF ANY IN USE—ONE THAT PROTECTS ITSELF IN A
GALE, WILL KEEP YOUR TANK FILLED WITH

Water Without Waste and Without Attention,

EXAMINE THE RECENT

Improvements of Mr. Bachelder,

As now Manufactured by the

Bachelder Manufacturing Co.,

NAPA, CAL.

Agents Wanted.

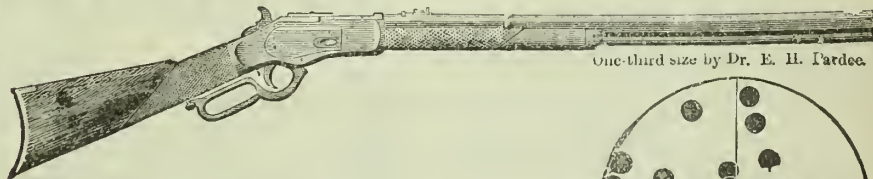
Able and reliable canvassing agents, who wish steady employment and good wages for good services, are invited to address this office and send references.

Engraving.

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco, at favorable rates. Send stamp for our circular and samples

Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

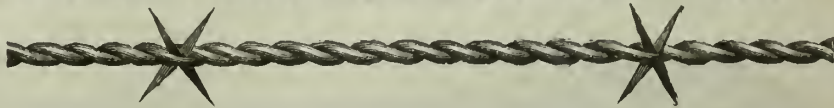
A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder.

JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

TO OUR PATRONS AND THE PUBLIC.



Having obtained the control of the SCUTT PATENT MACHINERY on the Pacific Coast, we beg leave to inform you that we are manufacturing the

Scutt Patent Four-Pointed Steel Barbed Fence Wire,

And we claim its superiority for the following reasons, viz: It is plaited, thereby preserving the grain of the metal. Our machines do not twist the single strand. We use steel made by the Seaman & Martin process for barbs. Our wire is made entirely by machinery, and is perfectly uniform. It is plaited by patent process, and is weather-proof. There are no knife points. It is four-pointed, having 128 points to the rod, double the number of any two-pointed wire. Our wire is wound upon strong spools, and can be shipped any distance.

To those needing fencing, and being obliged to transport it long distances by rail and wagon road, we would especially call attention to the difference in cost between barbed wire and lumber, as well as in cost of material. It takes 300 pounds single strand for one mile, and less than one-half as many posts as board fences. Please address orders to

GRANGERS' UNION, Manufacturers,
280 and 282 Main Street, STOCKTON, Cal.

25 FASHIONABLE VISITING CARDS—no two alike, with YOUR NAME PRINTED on Forty Mixed Cards for name, 10c. Nassau Card Co., Nassau, N. Y. Ten Cents. STEVENS BROS., Northford, Conn.

FOUNDED 1840
MOUNT HOPE NURSERIES
ROCHESTER, N.Y.

The Largest and most Complete Stock of Fruit and Ornamental Trees in the U. S. Priced Catalogues sent as follows: No. 1, Fruits, with colored plate (new edition), 15 cts.; plain, 10 cts.; No. 2, Ornamental Trees, etc., with plate, 25 cts.; plain, 15 cts. No. 3, Greenhouse; No. 4, Wholesale, and No. 5, Catalogue of Roses, Free. Address—

ELLWANGER & BARRY, Rochester, N.Y.

Printing Type For Sale Very Low.

We have on hand some 400 to 500 lbs. of brevier, in good condition, for sale at a bargain. Will sell a part only if desired. Second-hand cases to match. Also a font of bourgeois in first-rate order, with cases. Also a cabinet and upwards of twenty fonts of good display type, not very old and but little used. Some of the fonts are large, of modern style, and what might be termed good substantial display type for advertisements and job printing.

A good proof press will also be sold at a greatly reduced price from cost.

We can fit out a good country printing office nearly complete at a moderate cost. Call and see the material.

DEWEY & CO.,

Publishers, No. 202 Sansome street, San Francisco.

THE DINGEE & CONARD CO'S BEAUTIFUL EVER-BLOOMING

ROSES

We deliver **STRONG POT ROSES** for Winter Bloom and Fall Planting, *safely by mail*, at all post-offices. Five Splendid Varieties, your choice, all labeled, for \$1; 12 for \$2; 19 for \$3; 26 for \$4; 33 for \$5; 75 for \$10; 100 for \$13. Send for our New Guide to Rose Culture, and choose from over 500 Finest Sorts. Our Great Specialty is growing and distributing Roses. **THE DINGEE & CONARD CO.,** Rose-Growers, WEST GROVE, CHESTER CO., PA.

ANNUAL MEETING.

The annual meeting of the stockholders of the **Grangers' Bank of California** for the election of Directors, will be held at the office of the Bank on

Tuesday, the 8th day of October, 1878,

At one o'clock P. M.

ALBERT MONTELLIER,

Cashier and Manager,

San Francisco, Sept. 3rd, 1878.

42 California Street.

[BUSINESS NOTICE]

The Patrons of the California Agriculturist and Artisan

Are hereby requested to pay all accounts now due for subscriptions and advertising from the establishment of the Magazine to the present date to **MESSRS. DEWEY & CO.,** Publishers of the **PACIFIC RURAL PRESS**, San Francisco, or their Agents. Having sold and transferred the entire establishment and good will of the **Agriculturist** to that firm, I recommend all my present and former subscribers to extend their patronage to the **PACIFIC RURAL PRESS** as the most enterprising, reliable and ably conducted agricultural weekly published on this Coast.

S. HARRIS HERRING,

Editor and Publisher of *The Agriculturist*.

San Jose, August 28th, 1878.

Read Editorial notice page 152 of "Rural Press," Sept. 7th.

California Furniture Manufacturing Co.,

224 & 226 BUSH STREET, SAN FRANCISCO, CAL.

Manufacturers, Importers, Wholesale and Retail Dealers in

FURNITURE, Etc.

LATEST STYLES AND LOWEST PRICES.

A NEW COLONY.

100 Homes For Sale on More Reasonable Terms than ever before offered in Southern California.

Eighteen thousand acres of land in Monterey County, including the Pleito rancho, belonging to Pinkerton and Jackson, are now offered for sale in farm or homestead tracts to actual settlers. The lands embrace the finest wheat producing section in California.

Fruit, vegetables and all manner of small grain come to rare perfection in this region. For stock, hogs, bees and general farming, these lands are not excelled. Water and timber are abundant, the San Antonio river running for 12 miles immediately through the lands. Good postal facilities are already established, there being an office at the Pleito rancho, and the coast line of stages passing daily through the entire property.

The lands will be sold on the ground, and all parties desiring cheap, yet valuable farms, should not miss this opportunity of securing them. Those who first come will have choice of location.

An elaborate prospectus detailing terms and conditions of sale is now published and will be mailed to all who apply, by mail or otherwise, to the undersigned at the Pleito post-office, the point where for convenience the business in connection with this new colony will be transacted.

This is no stock company. The deeds to lands will come direct from Pinkerton and Jackson, to whom all moneys will directly pass, and each purchaser is only liable for the lands contracted for. There is no joint responsibility.

Send immediately for the prospectus, directing all communications or applications to

W. W. BROUGHTON,

Pleito Post-office, Monterey Co., California.

TO LEASE

ON FAVORABLE TERMS,

50,000 Acres of Irrigated Land in Kern County, with abundance of Water Free.

In tracts of 80 acres and upwards, with comfortable House, good Barn, and Well of excellent water.

CROPS ARE SURE.

An average of 30 bushels of wheat per acre, and other products in proportion, have been raised on this land.

INDUSTRIOUS FARMERS

With stock and implements will find every advantage in acquiring a home and a competence.

COLONIES WANTED.

For further particulars inquire of

McAFEE BROTHERS,

202 Sansome Street, San Francisco.

20 CARDS, all Snowflake, 10c., or 10 Best Chromos, 10c., with name. Samples 3c. J. B. HESTER, Nassau, N.Y.



THE AVERILL MIXED PAINT,

Prepared Ready for Use, is the Best, Most Durable, Beautiful and Economical Paint Known.

As is proven by the numerous Medals received over all other Paints, as well as by thousands of testimonials from those who have used and thoroughly tested it.

It is of Pure White and any Shade or Color Desired.

AS A HOUSE PAINT

It is the most perfect substance known, possessing unsurpassed beauty, great brilliancy of color, adhering firmly to the wood, and giving the richest, most agreeable and uniform tints.

It is equally as good for inside as outside work; over old work as well as new; in fact where any Paint can be used the AVERILL PAINT will be found superior to any other.

Houses painted with it are distinguishable for years by their superior brilliancy of finish, over those painted with any other paint.

Our Wagon and Machinery Paints

From the finest Vermilion, to the more common and cheaper colors, are specially fine, and being ready mixed, meet the wants of the public completely. Every person owning a wagon, or any kind of machinery, should occasionally give them a fresh coat of paint. It would add to the durability and appearance of the articles a hundred times its cost.

Our Metallic Paint

Comes the nearest to being actually Fire Proof of any Paint ever made. For Tin Roofs it has no equal, it being entirely impervious to air or moisture—rust or corrosion is impossible, while its use on shingle roofs not only fills up the cracks and prevents the shingles from warping, so as to preserve the roof and prevent its leaking, but its fire proof qualities are such, that a roof thoroughly coated with it is nearly as safe from fire as if made of iron. This feature, together with its cheapness, makes it most desirable for warehouses, bridges, mining buildings, and for all purposes where durability and fire proof qualities are desired.

Ask your dealers for it and take no other. Sample Cards of Colors and Price List mailed free on application to

California Paint Company,

No. 329 Market Street, San Francisco, Cal.





Volume XVI.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 14, 1878.

Number II.

The U. S. Wheat Crop of 1878.

The wheat harvest in this State is still hurried on by long days' threshing, but the comparative fewness of threshing outfits will still delay the final clean-up several weeks in some localities. Meantime the grain is pressing toward the shipping points as rapidly as possible, and the tired trainmen see no immediate chance for recreation. The price, too, holds considerably above the market set just before harvest by those who desired to buy at low figures. This is just as we have claimed from the outset, and there is still every prospect that a good remunerative price will prevail, although high figures need not be expected. It is interesting to note that the extravagant estimates of crops in the States east of the mountains are being reduced to a more comfortable level, and there is no reason to expect that their supplies will break the market.

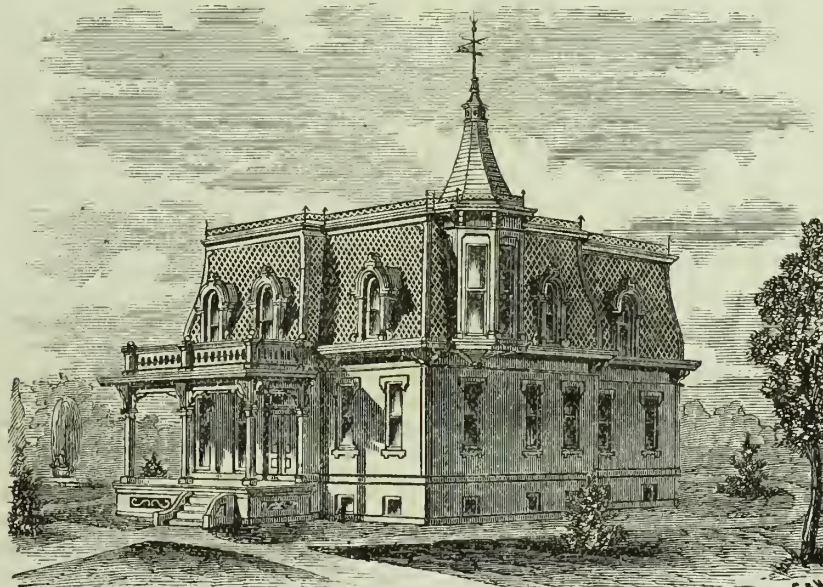
One of the fairest computations of the harvest returns for the whole country which we have seen is that furnished to the New York *Tribune* by J. R. Dodge, until lately the Statistician of the Agricultural Department at Washington. From this the report of Mr. Dodge we shall take leading figures, concerning the aggregate harvest of the country. Mr. Dodge asserts that there never was any ground for the extravagant estimate of a yield of 600,000,000 bushels, which was early and freely circulated in commercial circles. These commercial estimates have recently acknowledged a great reduction in the expected yield, yet gave to the spring wheat region 122,000,000 bushels, to the winter wheat belt, from Ohio to Kansas, 190,000,000, leaving the Pacific slope and the Eastern and Southern districts to add, even with crops no larger than the last, 122,000,000 more, swelling the aggregate to 434,000,000 bushels. Mr. Dodge claims that this is evidently too large, requiring apparently, from a careful review of all crop reports to date, official and unofficial, a reduction of at least 10%, notwithstanding the greatly increased breadth in cultivation. At this date, before the results of threshing have been fully presented, 13 bushels per acre for the entire field would appear to be a high estimate, and this would mean 390,000,000 bushels. Twelve bushels, an average crop, would give 360,000,000, or very nearly the amount of the past season's production. An extraordinary outcome in threshing in the best districts might carry the average yield a fraction above 13, but the present aspects of the crop rather indicate an average between 12 and 13.

There is one feature in the situation that should favor higher prices than the general abundance would appear to warrant. There are large yields in parts of the South that will be consumed there, not entering into the records of commercial distribution, while movement to prominent central points, like Chicago and Milwaukee, might be expected rather to decrease than increase in comparison with last year. This will give the impression of smaller supplies than really exist and may tend to stiffen prices that must be comparatively low. If an average European demand shall exist, farmers should not sacrifice their wheat, as it would all be needed. With low prices of wheat, improvement in manufacturing and the resultant enlarged consumption of bread and commercial business, there will be no surplus that Europe could not easily take.

The Memphis health officers have the street gutters flushed out with water every day.

A Neat Dwelling.

In the planning of houses and the ornamentation of their exteriors and interiors, there is wide room for the application of individual tastes. What would please one home-maker would not another. In our choice of designs to present to our readers, we have made a wide diversity in styles that each might choose according to his liking. The designs which we give on this page is another from the establishment of Isaac H. Hobbs & Son, architects, of Philadelphia, Pa. It is quite different from the light and airy cottage exteriors which we have given before. It is rather more severe in out-



DESIGN FOR DWELLING HOUSE WITH FRENCH ROOF.

line; the feature of the building being the French roof. It is quite flat above, but the upper rooms are kept from overheating by the downpouring of the sun's rays, by leaving an air-space between the roof and the ceilings of the upper rooms. It is estimated that the house can be built of frame, as shown in the

VEGETABLE MILK.—The Paris correspondent of the *Call* thinks we should, by all means, introduce the "milk tree" in California. We have now the best "milk tree" in the world fully acclimated and producing splendidly. She irrigates herself at the trough and is perfectly portable. However, it is interesting to know that "the French Academy of Sciences has been discussing the *galactodendron*, or 'milk tree,' and the possibility of its introduction into French Algeria. The *galactodendron* is a native of Venezuela. M. Boussingault, a French chemist, while in that country, accompanied a detachment of the native soldiers, who, on finding a 'milk tree,' cut the bark with their

sabres and for a time obtained their principal nourishment from its lacteal sap, which flowed in abundance. M. Boussingault analyzed the fluid, and found it to contain a fatty substance, sugar, vegetable fibrine, and some salts of potash and soda. He asserts that the 'tree-milk' contains even more nutrition than that



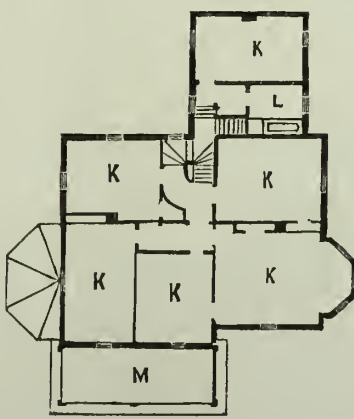
FIRST FLOOR.

plans, for \$2,500 where materials is of average cost.

The floor plans are explained as follows: A, hall, 8 feet wide; B, parlor, 18 by 20 feet; C, library, 14 by 16 feet; D, dining room, 14 by 16 feet; E, chamber, 12 by 14 feet; F, kitchen, 16 by 17 feet; G, china closet; H, porch.

In the second floor, K represents the chambers; L, bath room; M, veranda.

PHYLLONERA in Malaga is said to be spreading.



SECOND FLOOR.

from the cow. It flourishes at a considerable elevation on the Andes." This might be worth introducing as a curiosity, or for its value in the desert regions of the coast, but otherwise it would be of less use than a cow's horn. Boussingault is good authority, but we question the conclusion he is said to make of the nutritive value of *galactodendron* as compared with cow's milk. How would it do to introduce the tree to raise calves on? Some genius might graft on rubber teats and the vexed question of raising calves, when the cow's milk is needed for other purposes, would be settled for all time!

Reclaiming Shifting Sands.

In this State, as in many other parts of the world, it would be of great value to chain down the drifting sands on the sea coast by the introduction of effective vegetation. The encroachment of these barren areas grows apace upon the valuable coast soils. In the Golden Gate park in this city a good measure of success has been attained with lupine. We notice that our Australian exchanges are discussing the question and report some successes with plants which we believe have not been tried in this State. In places where it is found impossible to exclude cattle, they say that the robust kinds of perennial *mesembryanthemum* will be found very efficacious in restraining sand. The plants delight in the vicinage of the ocean; they will grow either on loose sand or on the bare subsoil left after the passage of the sands; in the one case they fix the sands, and in the other they not only cover the bare and unsightly earth, but gradually, by the arresting of particles of sand and by the decay of their leaves and stems, form a new and rich vegetable mold. In the shelter of their trailing stems the winged seeds of *Pomaberis ericifolia* find a lodgment and an aid to germination, as also to the seeds of clover, and especially of prairie grass. An exceedingly valuable grass for the reclamation of sands unprotected from cattle is *Elmus arenarius* or Sea Lyme grass—a very hardy littoral grass, which grows extensively on the coast of Sussex, in England. It has been tried in Taranaki, and is looked upon as a very valuable grass for reclamation purposes. It is not eaten by sheep, horned cattle, or horses; it will grow in the bleakest spots and within reach of the sea-spray; it forms great tufts of herbage from four to five feet high, and by its matted roots arrests the sands. Although it seeds pretty freely it does not readily propagate fresh plants on very bleak hills, on account of the seeds finding no lodgment, but being driven clean away by the winds. The evil is remedied when the plants have become sufficiently plentiful to form a shelter. At first it is necessary, therefore, to raise plants from seeds in a nursery and to plant them out on the hills when they have attained sufficient maturity, or, as the mature plants will bear division, to plant out stolons in rows, in damp weather.

THE GLANDERS.—Country readers are naturally alarmed at the reports of the existence of glanders among the horses in this city. Quite a large number of cases have been currently reported, and it would be well for all owners of horses and cattle to be on their guard as much as possible against contact with diseased animals, in fact with any animals which they do not know to be free from the disease. By order of the Board of Supervisors of San Francisco, as expressed in an ordinance dated May 20th, it is now made a crime to remove any horse from that city which has the glanders, where before the local law required the animal to be killed or removed to the country. This new ordinance will aid the country in preventing the importation of the disease from San Francisco. It would be the part of wisdom not to bring animals to the city unless it be for the purpose of immediate sale, and not to take animals from the city to the country without full surety that they have not been exposed to the disease. This would be at least a safe policy for the present, and it is every man's right to quarantine all strange animals at a distance from his own stock as far as he is able to do so.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds

Tulare County—Milling, Dairying, and Other Industries.

EDITORS PRESS:—Milling, dairying, bee-culture, and fruit-raising are making good progress among the industries of this justly noted Mussel Slough country.

Two Flouring Mills

Are now in full operation, affording a home market with its usual advantages for a small part of the wheat now produced here, and turning out a good quality of flour. The one at Grangeville has been running about two years. The Lemoore mill began work last March. The building of the Lemoore Flouring Mills Company is a neat and convenient structure upon the north side of the railroad track in the eastern edge of town. Its ground measurement is 72x48 feet. It consists of a brick basement, surmounted by a strongly made frame building, three stories high, and forms a conspicuous and useful landmark for several miles around. A good 120-horse power engine runs three sets of stones for flour and middlings; and one for barley. They usually consume about 300 sacks of wheat, and turn out from 110 to 120 barrels of flour in 12 hours, or an average of about 10 barrels per hour. Its bins have a storage capacity of 1,700 barrels. They find a ready sale for all their flour. They ship chiefly to Los Angeles, Fort Yuma, and southward; but the day I was with them, they were filling an order for 500 barrels to go to China. Many farmers from the surrounding country have the wheat ground for home use there, and pay 40 cts. per 100 for grinding. Their flour has been selling in the home market this summer usually at \$5 per barrel. Naturally the gentlemen engaged in this work have encountered difficulties incident to all such enterprises in their beginning. But in the hands of its energetic manager, Mr. I. H. Ham, and of Mr. F. Gilmore, one of the best engineers on this coast, it will no doubt achieve the complete success which it well deserves. Mr. Gilmore uses on his engine, "Reynold's Cut-Off," regulated by an "Improved Allen's Governor." He speaks in the highest terms of their safety and general efficiency. From Mr. Ham, I learn that the building and machinery cost about \$30,000.

The Mussel Slough Flouring Mill,

Owned and run by Thorne & Co., occupies a plain two story, frame building just south of Grangeville. It has a high reputation, of which its owners are justly proud, for turning out the finest of flour. It is run by a 25-horse power engine, consumes some 60 sacks of wheat, and makes from 20 to 25 barrels of flour in its daily run of 12 hours. Charge for grinding is the same here as at Lemoore. Its flour usually retails at \$6 per barrel, and is acknowledged to take the lead. I am indebted to the courtesy of Mr. Sullivan, one of its joint owners, for most of these items. The fine quality of their flour is largely due to the skill of their miller, Mr. Andrews. Grain raisers are fortunate to have such mills in their immediate neighborhood. Their tendency always is to improve the home market for grain, and to stimulate farmers to improve the grade of their wheat.

This favored region needs next its woolen and cotton mills, and will, no doubt, have them before ten years more have rolled by.

So much interest has been felt for some years in the successful development of

Dairying as a Farm Industry

In the warm regions of the San Joaquin valley, that I have lately examined with special interest an experiment in that line near Lemoore; and with the consent of the inventor, for the design involves no small amount of intelligent and useful invention, I beg leave to give your readers some insight into its details.

Several principles which it has been predicted would work successfully in our large valleys, where the summer heat sometimes ranges between 100° and 110° in the shade, even on our improved ranches, are applied in this experiment for the first time in San Joaquin valley, so far as my observations go.

The building in question recommends itself, to any one who will study the adaptation of means to ends, by its general efficiency, economy and neatness. It is on the well-improved ranch of 30 acres, about a quarter of a mile from Lemoore, belonging to Dr. L. L. Moore, in whose honor the town was named. Dr. Moore, being a constant reader and warm friend of the RURAL PRESS, treated your correspondent with that kind hospitality, in his beautiful and comfortable home, for so much of which we owe our best thanks to the many good people of our farming districts, and gave me every facility to examine his dairy as well as the many other good and instructive features of his well-managed farm.

Including the dairying, this

Thirty-Acre Ranch.

Like Dr. Bradley's 11 acre tract near Grangeville, very fully illustrates how much can be done, what a variety of products can be easily raised, on a small acreage well irrigated, towards the comfortable support of a family. The only trouble is that in Dr. Moore's case, he thinks he

has a little too much land to handle thoroughly under the new method of cultivation. So he proposes to cut off 10 acres and leave himself an even 20 for future culture.

Let us take a general survey of the uses to which this tract is applied before we examine the dairy in detail.

During a residence of five years in California, the Doctor has been on this place only three years last April, and it was but slightly cultivated before that date, two rows of tall and handsome Lombardy poplars near the house being almost the only evidence of such early cultivation. Now the north line is bordered with these graceful trees, the west and south lines by willows. There are 5 acres of old alfalfa, and 10 of young, sown last spring, some 2½ acres of the former being five years old. One Lombardy poplar, three years old, is 30 inches around, 5 feet from the ground, and 38 inches near the ground. He has between one and two acres of orchard, including 43 bearing peach trees, most of the latter of two years' growth from the time of setting out, or three years old this fall from the seed. This summer they were loaded with fruit of large size and richest flavor. Last spring he sowed two acres of barley hay, cut with fine yield about June 1st. Before July 1st, these same two acres were planted in corn and pumpkins, which were growing luxuriantly in August with promise of abundant yield. He has also a fine large patch of strawberries, and the space in front of his neat, handsomely furnished, and thoroughly ventilated two-story house, is beautified by cheering shrubs and flowers.

That part of the alfalfa reserved for mowing is cut regularly every 30 days. Already this year it has been cut four times—about the middle of May, June, July and August, averaging per acre from one to two tons each cutting. The Doctor has no fencing, except some panels to make his hog pens, where 28 porkers—large and small—luxuriate under the dense shade of willows and poplars. On between two and three acres of alfalfa, he stakes 8 cows, 5 calves and frequently from 1 to 3 horses. Besides this green feed for cows, he finds it best to feed them some dry alfalfa hay daily. This course secures more and richer milk, and keeps his cows in the best condition.

So now we have arrived at what I think we may truly call

The Model Dairy

For San Joaquin valley with its long, warm summers—warm, that is, through midday, but, with very rare exceptions, delightfully cool at night. This latter difference—hot days, cool nights—the idea of thorough ventilation and tight double walls, are the three principle, which Dr. Moore has utilized to keep milk and butter properly sweet and cool through the hottest summer days, as follows: The dairy is, in outward appearance, a plain redwood building of balloon style, a story and a half high. It is placed on a good brick foundation, a foot or two high. Its outside measurement is 12x14 feet, the inside of lower story 10x12. The outside wall is made with the usual upright boards closely battened. The inside wall of the lower story is made of narrow, tongue-and-grooved, closely-fitting ceiling, which is placed so as to leave an air-space of about a foot between the two walls. The lower floor consists of well-packed earth and is sunk only about a foot below the surrounding ground. The upper and lower story are separated merely by a common pine floor, made close as possible and of narrow flooring. The roof is made of shakes, but the whole building is well shaded by two large weeping willows—a most important item in keeping the air cool in the lower room. The gables are north and south. The upper room has a large door in each gable, but no other openings. These are kept open constantly to allow a free circulation of air.

Now for the mode of ventilating and cooling the wide air-space between walls below. On the north and south faces at each corner are openings one foot wide, five up and down, and covered with wire gauze. These windows are closed on the outside, when desired, by sliding shutters. By these means, outside air can be admitted into the air-space, or excluded, at will. There is another such window in the middle of the west wall. In the north and south walls of the lower story are screen doors, with shutters moving on rollers back and forth, the air-space affording convenient room for them. At night all of these lower doors and windows are opened, the wire gauze keeping out troublesome insects. About 7 o'clock in the morning they are all closed and kept so through the day, entirely excluding light and air from without. This contrivance works with entire success, keeping the milk sweet and butter hard—by aid of wet cloth cover the butter pans—when the outside air is 105°, which it rarely exceeds on this ranch even when it is 110° in the adjoining town. Dr. Moore informs me that, in the heat of the day, he has taken a thermometer from a well-shaded place in the open air into the milk room, and the mercury dropped 27° near the ground, and 15° in the upper part.

The middle of the milk-room is occupied by a frame for milk-pans. The shelves are made open by strips two inches wide. This frame is about 3 feet wide, 8 long and 7 high. It will hold 160 pans. Hence, as each holds about a gallon, and four on an average will suffice for one cow daily, the milk of 40 cows can be provided for in this small dairy house. The plan can be enlarged at will. Shelves on the inner walls answer for fruit cans and preserve jars. Ants are effectually guarded against by keep-

ing the legs of the milk frame in bowls of water. A flight of stairs outside and a light veranda lead to the upper room. The entire cost of this dairy was about \$150.

The Richest and Sweetest

Of milk and butter come from that modest little dairy, through the good management of Dr. and Mrs. Moore, who are out at 4 o'clock every morning to look after its interests. These details are given minutely with the hope that they may be of use to others.

Their sour milk is fed to calves and pigs, the former getting also green alfalfa, and the latter middlings and soaked barley. All waste and parings go to the swill barrel. For the hogs the doctor soaks his barley well, sours his mill feed and lets the mixture stand for 24 hours putting in a small amount of salt every day or two. His hogs are kept in pens all the time. The original stock cost him \$34 about the middle of June. Two months later with their increase, they were worth about \$75. Their feed of barley, middlings, and bran cost about \$8 for that time. Your readers can figure on the profits.

As regards the value of this young peach orchard alone, for two families they had the greatest abundance, canning enough, also, for winter use. They sold 28 dollars' worth, and have dried from 50 to 75 pounds. The life and profits of this and adjoining tracts, come from five little streams of water, flowing under watchful and intelligent control in different directions from a high point on the eastern edge of this ranch to which it is brought from the lower King's River Ditch.

Dr. Moore has certainly furnished another full confirmation of the truth, that twenty acres well watered and tilled can comfortably support a moderate-sized family in California.

Other items about bee-culture and fruit raising in this interesting region must be reserved for a future letter.—J. W. A. W., Tulare Co., Aug. 20.

Scenes in the High Sierra back of Yosemite.—No. 1.

[Written for the PRESS, by J. G. LEMMON.]

Joy, wonder, exhaustion! I have just returned from a two weeks' exploration, alone, of the high Sierra back of Yosemite, 20 to 50 miles. The trip included the ascent of the world-famous Half-dome by means of a rope for the upper 900 feet, the lofty and never-before-surmounted Lyell group of peaks, and lastly, the culminating peak of this region, Mt. Dana. The exploration was a grand round of labor, exposure and pleasure. The striking views met with must accompany me through life.

Pinnacles of splintered rocks shooting skyward over 13,000 feet; vast amphitheaters scooped out of their bases by volcanic forces in the old ages, now half filled with perpetual snow, each mass resting upon a living glacier grinding its way down to limpid lakes at the present melting point, and carrying on its back scattered rocks as they fall away from the pinnacles in the never-ending process of disintegration; semi-circular moraines of these rocks arranged in curved parallels across canyons and valleys, for miles on miles, or waving lines of medial moraines threading the valleys, showing the dividing line between two glaciers; bright bands of sheen striping, forest-denuded mountain sides, showing where scoured the mighty ice masses in the old geologic æons, plowing the present Sierra valleys; noble forests of pine, fir and spruce, filling the worn, sheltered slopes, or strange, almost unrecognizable trees, sparsely fringing rock cliffs of high spurs or depressed flat, to lichen-covered rocks by the ever-blowing winds of high passes; brilliant gardens of rare flowers studding sunny alpine slopes, or, more interesting still, new, undescribed flowers peeping from out bare terminal pinnacles upon these interesting objects; and on such as these, I have gazed enraptured, among them climbed bewildered, for a whole fortnight of red-letter days.

Of all the tourists and scientists in Yosemite I could get none to join me in the exploration I had planned. It was vain to pause regretting the absence of those who would accompany me had they been privileged to be here; so, packing my trusty and strong horse, "Stanley," with blankets, provisions, botanical papers and pick, I hastened away alone, taking the trail up the middle alcove of the Yosemite gallery, past the two grandest falls, Vernal and Nevada, to the upper Yosemite valley back of South Dome and Cloud's Rest. This upper valley would be a great wonder anywhere else, being walled and embossed with similar rocks and domes as the great Yosemite, but not so lofty. Its floor is clothed with a richer forest, owing to its greater elevation, 6,000 feet. The upper portion is fenced across by a high, strong fence of cedar rails, and contains some excellent meadows, the pasture grounds of Washburn & Bruce, the enterprising owners of the Mariposa Big Tree station. Between these valleys rise up three much visited and often portrayed objects: Cap of Liberty, Half-dome and Cloud's Rest. The first and last of these are easily climbed; but the Half-dome, an ob-

late, flattened mass of granite, protruding edge-wise from the wooded mountain tops and split in twain longitudinally, has, until lately, defied all attempts at surmounting. But an ambitious, keen-eyed, cool-headed, sure-footed Scotch sailor named Anderson has compassed its ascent, and assisted by him a few daring spirits have climbed up the rope which he has fastened with iron pins driven into holes drilled into the rock, a most perilous and laborious work. He has prepared the material for a wooden stairway to the summit, but for some reason the completion of the enterprise is postponed.

It was by the merest accident that I ascended the famous throne of "Tis-sa-aek," the Half-dome, the cynosure of all eyes at Yosemite, and without doubt the most striking natural object yet discovered on our planet.

Leaving my baggage in camp at Little Yosemite valley, I started on the morning of August 14th up the trail leading to the base of the dome. When near the cabin of Anderson (of which I was ignorant at the time) my spirited horse, suddenly hurrying up a short steep, so shrunk in his body that the saddle girth slid back, causing him to take fright and to rear and plunge, finally landing me upon the rocks, badly spaining my back. For a few minutes I lay helpless, while "Stanley," still rearing and kicking, cleared himself of saddle, blanket, etc. With difficulty I rose, recovered horse and equipments, some of the latter sent hurtling far down the slope. I readjusted the horse, mounted from a convenient, jutting rock, and rode on up the trail, determined at least to see the heroic achievement of Anderson.

In a few minutes a rude whip-saw mill, then a small log cabin came in sight. I rode up and hailed. A man came out, took in the situation at once by a glance at my pale face, lifted me off the horse and carried me into the cabin, where a berth of pine boughs and a cup of coffee soon began the work of restoration.

In a few minutes a fellow daring spirit and coworker of Anderson's, Mr. J. B. Lambert, came in, and at once he placed me right at home with rude but true and characteristic travelers' hospitality.

Learning that I was a botanist, Lambert questioned me closely concerning the trees of the vicinity, and urged a short walk among them, proffering his arm. By chance we wandered up the slope, talking about and studying the trees. Accidentally we fell into the trail, and at length reached the bare, steep dome that flauks "Tis-sa-aek" on the east, and is about one-third as high. Here I was exhausted and stopped to rest my broken back. While bewailing my condition, Lambert proffered farther help, and getting down strei hands and toes showed how Anderson d such rocks. I began painfully cre the rock, 10c, or 1, smooth rock, for the first 100 feet. —, thence the proper and perilous climbing commenced. Each hand and foot had to be carefully placed among the loose, dissolving granite resting on a surface elevated at an angle of about 60°. Slowly and with frequent halts the ascent was made of the attendant dome. From its top a close view of the giant wonder is given. But I could not be satisfied with only a sight of Anderson's rope running like a dark line from pin to pin until lost to sight over the crown. Lambert kindly assisted me down across the saddle of rock between, and joyfully I handled and examined the lower end of the long 900 feet line. It is made of baling rope, 5 to 11 strands in number, one being knotted around the rest once in 10 to 14 inches for convenience of staying the hands from slipping.

My regret at being placed hors de combat just that morning, of all the 10 weeks almost constant riding from Santa Barbara to and about Yosemite, now became agony. I gathered souvenirs of flowers and prepared to return, when a voice hailed us from over the east dome, and a man came stalking down the slope with a sure and easy tread that told the strength of his limbs and the resolution of his heart. He proved to be Mr. E. W. Baker, a cool headed carpenter from Alameda, accustomed to walking on dizzy heights. Hastily inquiring he learned my state, but declared I must go up with him if he had to carry me on his back. Taking from a bush near by the rope that Anderson used for the purpose, about 15 feet long, he tied one end about his waist and I placed the other about mine.

Promising to let me down from any point if my strength failed me, he grasped the rope and ran up unobscured by a cat, hand over hand, and I slowly followed. Raising the rope out from the rock causes your pressure against it with nailed boots to be increased in the ratio of your lifting power. So firmly your feet cling to the glassy rock, and clink, clink, the iron nails ring out upon the air, keeping time with the regular reaching of the hands up, up, up!

Occasionally, clefts, in the rock afforded foothold enough for a moment's rest and a survey of the glorious scenery unveiling below. The great Yosemite from Mt. Watkins to Eagle Rock yawned on our right. The scarcely less interesting Little Yosemite, began to show its further domes over the forest on the south; before us diminished the attendant dome, from whose top the voice of Lambert came cheerily: "You are doing well!" "About half-way up!" Later came the shout, "Three-fourths of the way!" My back seems to be separating in the region of the lumbar vertebra and pains shoot through the part keen as knife-thrusts, but I keep on grasping the rope with trembling,

weakened fingers. "Only three pins more!" I gasp and feel an inclination to halt, and turn around giddily. "Depend more upon the little rope," Baker calls down, in a firm voice. "I can pull you up bodily." "Almost up!" shouts Lambert from the far depths. "One more pin!" Baker creeps up to it, sits down above it, and pulls me up over the cape stone. The perilous climb is done; the crown of "Tis-sa-ack," is reached, over 10,000 feet, nearly two miles above the level world! Rest followed, while the hearts throbbed and the eye wandered. O, what a glorious vision lies out-spread, of gorge and dome, turret and pinnacle!

Warm, forest-clothed valleys clasp the bases of cold snow-mantled peaks. Rivers rush cascading down precipices, their sources locked behind moraines as blue miniature lakes, the pools at the foot of melting glaciers. The air is cool and still, and unflecked in all the azure expanse save a few white cumuli in the far east, riding like vast argosies dangerously near the pinnacles of Lyell. How sweetly, softly, falls the noontide sunlight upon the deep, almost bottomless Yosemite! Scarcely you realize the valley is there. The dew and humidity of the atmosphere beclouds all below, in contrast with the clear ether of the upper depths that seemingly brings distant peaks to be close at hand. To see peaks you must climb peaks. What appears towering and majestic to the observers of the valleys, is dwarfed to mole hills or lost entirely. Mt. Star King on the south, Sentinel dome at the west, a nameless dome across the valley to the north, and Cloud's Rest at the east, all rounded summits, seem brother formations with "Tis-sa-ack." Lower, hundreds of domes, embossing the granite plateau, tell where the glacial seas of old did effective work in crushing mountain summits, leaving their hardened knobs as records of their elevation and power.

Exploring the top of the half dome, we found it a convex, elliptical table of rock, depressed several feet near its center by a cross valley, and extending about 100 rods in a direction nearly northeast and southwest. The north wall, seemingly so smooth and clean cut from below, is really notched and much diversified. On its outer point, the visor of "Tis-sa-ack's" crown, stands a flagpole of fir about 15 feet long, and eight inches in diameter at its base, upheld by piled rocks. Though seldom registering myself in the usual places, I thought it proper to pencil my name here with the thirty or forty only others that have ventured up this fearful steep. We let fall stones from the cliff and timed their arrival at the incline facing Mirror lake, 11 to 13 seconds according to character of plummet, whether light slate or heavy granite.

Southwest of the flagstaff about 10 rods is a fissure cleft through the crown of the dome, about one foot wide, concealed for most of its way by a sliding cap, the upper concentric layer of rock that overlies this dome like all the rest. We dropped pebbles into the exposed end of this fissure at the southwest, and heard them descending for 13 seconds. Taken into consideration with other lesions, and splittings notably on the Cap of Liberty and elsewhere, there may be some ground for the belief of the Indian relics here that the sides of the Yosemite are destined to fall in and destroy the white man.

Only one tree has taken root on the summit. This stands near the edge at the western side of the ellipse and is about two feet thick at base and 25 feet high, with the peculiar, many-branched, depressed limbs of the *Pinos monticola* found on such heights.

The flora of the dome is either dwarfed specimens of lesser elevations or small alpine species. I gathered characteristic specimens as souvenirs, and find that a few dozen species would comprise the list; principal of these are several species of *Eriogonum*, *Spiraea*, *Hieracium* and *Ivesia*, with the dwarfed form of the golden-cup oak (*Quercus chrysolepis*) that so puzzles our American authority for forest trees, Dr. Engelmann, of St. Louis. This was called a distinct species by Dr. Kellogg, of San Francisco, but on the various slopes about Yosemite and elsewhere in the Sierra, I have found specimens grading all the way from the tiny prostrate bush loaded with small, smooth-cupped acorns, to the tall, majestic tree bearing yellow, golden, dust covered acorn-cups two inches across; and I quite agree with Dr. E. that the species included all the forms.

The descent of "Tis-sa-ack," by the small rope swinging almost vertically over the side, was scarcely less fearful though taking less time, and was performed by backing down. Often the foot failed to find a resting place and you dangled in air until reaching over and beneath the concentric layers your iron boot-nails caught upon the inner rock. And thus slowly you drop down from the pinnacled horizon of myriads of of snowy crests to the misty and shadowy depths of the pathless forest, from the brightness of heaven to the gloom of earth, from "Tis-sa-ack's" crown to "Tis-sa-ack's" foot.

On Drainage.

EDITORS PRESS:—Whatever may be the outcome of the cheat controversy, it is our experience that rich wet land will grow cheat when plowed and sown to either oats, barley or wheat. So far as the farmer is practically and immediately concerned, it makes no difference whether all or neither turned to cheat, or whether the wet killed the grain and nourished into life and growth the cheat. The crop aimed at was destroyed and kind Nature produced the

best crop she could for the labor applied to the land by the farmer.

It is well known that cheat lands will grow good grain in a dry year, and, further, if the land is well drained, will grow good crops of grain in wet years. So far as we can see, the farmers should be taught to drain their lands if cheat, and a series of articles upon that subject in the RURAL PRESS would be of eminent advantage to the agriculture of this State, as there are almost as many acres of land in northern California that want draining as there is that want irrigating.

This information should extend to the pointing out what quality of land should be drained, and whether the drains should be open ditches or underdrains; how the ditches can be best constructed, what width and what depth. Are there any machines adapted to the purpose of making small drains? If so, are they cheaper than hand labor? Where can they be obtained, and at what cost, etc.? If underdrains are recommended, what material is best and cheapest, and where can it be obtained?

If farmers could realize the importance of draining as well as irrigating, cheat would not only disappear from the cheat lands, but high lands with a clay subsoil, although not now yielding cheat, would, if well drained, yield double the crop it does now in wet years. Such land would be wetter in a dry year and drier in a wet year.

JOHN M. HORNER.

Washington Corners, Alameda Co.

[Yes. Drainage in this State, where the writer can speak from the results of experience, would be an excellent subject for writers. Who will take up the theme?—EDS. PRESS.]

Notes on Animal Diseases.

EDITORS PRESS:—My horses, about which I wrote in RURAL of December 29th, got well. I never did anything more to them but what I described in my letter at the time, namely: putting a spoonful of turpentine in each ear and feeding condition powder. I got my idea about putting the turpentine in their ears from the *Chronicle*. It published a piece about sheep having the "loco," and said it was supposed to be caused by some kind of a fly laying an egg in the ear which hatched and caused grubs in the head.

I have been raising horses and mules for a good many years and have seen a number of horses with what was called Spanish fever or "loco" and "rattle weed." There is no mistaking the disease as described in my former letter. My horses got better than any that I ever saw with that kind of disease before. I think the turpentine cured them. I have been in the stock business for over 20 years.

One of your subscribers speaks of his mule rubbing and having sores on him. He gets that from his sire, the Jack. It is a very common thing for them to bite and rub themselves if kept closely confined. Turn him loose where he can walk around.

Kerosene for Snake Bites.

I have seen a number of cases of snake-bite published in the papers this season. I saw a mare with a very bad scar on her face, and I asked the owner what caused it. He said she had been bitten by a rattlesnake, and that her head swelled very large, and he had nothing but a quart bottle of coal oil and commenced bathing her with that. It stopped the swelling immediately. I afterwards carried coal oil to the mountains when I drove my sheep, for fear I might need it. Sure enough I had two Shepherd dogs bitten one evening. One of them was bathed immediately, and its head did not swell but very little, and the other one was swelled as big again as it ought to be by the next morning. We then went to work and bathed it well, and both of them got well and were able to go to herding in four days. I used nothing but coal oil.

W. H. BAKER.

Millville, Shasta Co., Cal.

We know no reason to connect "loco" poisoning with the work of an insect, although animals may be maddened by attacks of insects and act so that a casual observer would pronounce it "loco." This was the case with horses in Tulare county, whose ears were found filled with large "wood ticks" some time ago. If the case is found to be one of insects, kerosene would be a far safer application than turpentine, for it is just as deadly to insects, and is soothing instead of inflammatory to animal tissues.

The idea that "loco" proper is caused by an insect, either in sheep or horses, is wrong. Sheep are attacked by a grub in the head which makes the animal dash wildly about, stamp, snort and toss its head in a frantic manner. This grub enters by the nostril and reaches its growth in the nasal cavities and sinews, and putting turpentine in the ear would be as futile in such a case as to fill one's ear with snuff to cause a sneeze. "Loco" poisoning is caused by eating a poisonous weed.—EDS. PRESS.

A CAR FOR LIQUIDS.—There is shown at Paris a tank car for alcohol, wine, etc. It has a cylindrical horizontal tank, with suitable connections, and a rotary pump serving to charge the tank, or, by reversing, to empty it.

THE APIARY.

Where to Locate an Apiary.—No. 3.

EDITORS PRESS.—I believe we left off with the honey-producing plants of Southern California. I have named the principle plants that constitutes a good pasture for an apiary.

There are qualities, if so we may call them, in the apiarist himself which should be considered. One is nerve, for stings he will get, and some days one hundred will not count them; but after a while one does not mind them, as the hands and the face should always be protected by a bee hat. There are several kinds, and the one that suits you is the best. We will say more of this in future. Bee keeping is no employment for an invalid as some people think, for it is very hard work, and wants a constitution that will stand one hundred and fifty pounds pressure to the square inch, and he will use it all in the three or four months of actual work which has to be done. There is no putting off for the morrow. The extractor has got to run; and an apiary of three or four hundred stands should be gone through once in 12 or 14 days, according to the time of year that brings us to the different qualities of honey, of which we shall treat hereafter.

If a day is lost, it is lost for ever, and a day's work for one hundred stands of bees, in the best of the season, is from 500 to 700 lbs., and the price of that would pay a hired man a month's wages. Again, if the combs get full and have no room the bees will swarm, and that takes time to put them back, so both you and the bees have lost time, which is valuable if counted right.

Two men can extract from thirty to fifty in a day, and if the honey is in the right condition to extract, the day's work will count from 2,000 up to 2,500, or \$3,000 lbs. This has all got to be canned in the morning, for it is better to let it settle twelve or more hours. It will keep better, look clearer, and all the fine particles of wax or comb will rise and should be taken off every day or two.

HYBRID.

Scenega, Ventura county, Cal.

THE STOCK YARD.

Herefords at English Shows.

The *Mark Lane Express* in its report of the Bath and West of England stock exhibition, says: The Herefords are not so numerous as the more fashionable breed, but the quality throughout is excellent. In the aged bull class there are five animals, of which the Hereford men need not be ashamed. Mr. Aaron Roger's "Grateful" secures first prize and the champion prize of the Oxfordshire Agricultural Association, for the best male horned animal. This bull has a most extraordinary good forehead; his chin, back, ribs and loin are wonderfully good, in fact his ribs are perfect—but there is a defect behind, his quarters are drooping, and his twist narrow, although his rounds are fairly good, and this spoils his appearance. Still his good points are so good that Mr. Thomas' "Horace 2d," which took the second prize in the younger class at the royal last year, and Mr. Taylor's "Thoughtful," which was first at the royal, were both defeated. There were but two entries in the next younger class, to which the prizes were both awarded, Mr. H. N. Edwards taking first with "Durable," a bull which has greatly improved since last year, and Mr. Philip Turner second with "Corsair." The next class, for bulls over one and under two years old was rather weaker.

The bull calves were a very excellent lot of youngsters. Mr. Hungerford Arkwright's "Conjuror" took first honors, and is a very promising calf; the same may be said of Mr. Carwardine's "Lord Oxford," which was second, and Mrs. Sarah Edwards' "Master Butterfly" pushed them very hard, but only obtained the reserve. The cows were four good animals, for it is very seldom that Hereford men will show a bad cow; they get patchy, but are not usually so uneven as their more fashionable sisters. The heifers in milk or in calf numbered only three. Mrs. Sarah Edwards, of Wintecott, took first and second, leaving Mr. Lutley the reserve; but Mrs. Edwards' "Leonora" is one of the most perfect animals that has been shown for years. The champion prize given by the Oxfordshire Agricultural Society was also awarded to this heifer as the best female horned animal in the yard. The companion heifer, "Beatrice," is also very handsome, and took second to "Leonora's" first at the royal last year, as it did last week at Oxford. No Short Horn that we have ever seen was cast in such a mold as this Hereford heifer. Then in the next younger class Mrs. Sarah Edwards leads off again with a sweet heifer of 22 months old, "Spangle 3d;" Mr. John Morris' "Empress" was second; Mr. Platt got highly commended for a nice heifer. The heifer calves were one of the best classes in the show; some of them were beautiful. Mr. Hungerford Arkwright's "Gaylass" was first, and Mr. W. Taylor's "Empress" second; the latter is a little plain behind her shoulders. The Herefords altogether were as good as usual, if not a little better, and the Hereford men have the satisfaction of taking the two open champion prizes—in fact, they have scored well at Oxford.

ARBORCULTURE.

The Atlantic and Pacific Forests.—No. 4.

[By PROF. ASA GRAY.]

It does not altogether follow that, because rain or its equivalent is needed for forest, therefore wherever there is rain enough, forest must needs cover the ground. At least there are some curious exceptions to such a general rule; exceptions both ways. In the Sierra Nevada we are confronted with a stately forest along with a scanty rainfall, with rain only in the three winter months. All summer long, under those lofty trees, if you stir up the soil you may be choked with dust. On the other hand, the prairies of Iowa and Illinois, which form deep bays or great islands in our own forest region, are spread under skies which drop more rain than probably ever falls on the slopes of the Sierra Nevada, and give it at all seasons. Under the lesser and brief rains we have the loftiest trees we know; under the more copious and well-dispersed rain, we have prairies, without forest at all.

There is little more to say about the first part of this paradox; and I have not much to say about the other. The cause or origin of our prairies—of the unwooded districts this side of the Mississippi and Missouri—has been much discussed, and a whole hour would be needed to give a fair account of the different views taken upon this knotty question. The only settled thing about it, is, that the prairies are not directly owing to a deficiency of rain. That, the rain-charts settle, as Professor Whitney well insists.

The prairies which indent or are enclosed in our Atlantic forest region, and the plains beyond this region, are different things. But, as one borders—and in Iowa and Nebraska passes into—the other, it may be supposed that common causes have influenced both together, perhaps more than Professor Whitney allows.

He thinks that the extreme fineness and depth of the usual prairie soil will account for the absence of trees; and Mr. Lesquereux equally explains it by the nature of the soil, in a different way. These, and other excellent observers, scout the idea that immemorial burnings, in autumn and spring, have had any effect. Professor Shaler, from his observations in the border land of Kentucky, thinks that they have; that there are indications there of comparatively recent conversion of oak-openings into prairie, and now, since the burnings are over, of the re-conversion of prairie into woodland.

I am disposed, on general considerations, to think that the line of demarcation between our woods and our plains is not where it was drawn by Nature. Here, when no physical barrier is interposed between the ground that receives rain enough for forest, and that which receives too little, there must be a debateable border, where comparatively slight causes will turn the scale either way. Difference in soil and difference in exposure will here tell decisively. And along this border, annual burnings—for the purpose of increasing and improving buffalo feed—practiced for hundreds of years by our nomadic predecessors, may have had a very marked effect. I suspect that the irregular border line may have in this way been rendered more irregular, and have been carried farther eastward wherever nature of soil or circumstances of exposure predisposed to it.

It does not follow that trees would re-occupy the land when the operation that destroyed them, or kept them down, ceased. The established turf or other occupation of the soil, and the sweeping winds, might prevent that. The difficulty of reforesting bleak New England coasts, which were originally well wooded, is well known. It is equally, but probably not more difficult to establish forest on an Iowa prairie, with proper selections of trees.

[To be Continued.]

A RECOVERED FUNGUS.—Rediscovery of a lost *Sphæria* is noticed by the bulletin of the Torrey Botanical club. This fungus, the *S. barbirostris*, was discovered by Dufour, in the department of Landes, France, over forty years ago. Since then no specimen has been found until lately, when Mr. J. B. Ellis rediscovered it on some maple bark at Vineland, New Jersey.

PREPARING WOOD FOR POLISHING.—The *Cabinet Maker* says: After staining size over with varnish or polish, for mahogany, walnut, and similar woods, finish the surface with sandpaper, No. 0; oil with linseed oil, colored red with alkanet root; let it stand for a time until the oil has thoroughly soaked in; then proceed to fill in the pores with the following composition: Plaster of Paris, 3; tallow, 1; and a little red polish (ordinary polish colored with dragon's blood). Work the whole until it is thoroughly mixed and becomes a crumbly mass. Rub well into the wood with a piece of rag, clear off all the superfluous filling in, and the surface is ready to body in and polish.

FAST TIME.—The fast train put on by the Pennsylvania Railroad Company between Philadelphia and New York seems to have proved a complete success. It runs on portions of the distance at a speed of one mile in 50 seconds, as reported by parties who have timed it.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Is It Consistent?

EDITORS PRESS: Is it not suggestively curious that the colonies, with apparent odds against them, could and did risk all expense and suffering incident to a war with England for the admitted enjoyment of "inalienable rights," or specifically the right of "representation in the taxing power. They fought for liberty, the "elective franchise," the function of "popular sovereignty." But, after a century of progress in some direction, "suffrage," a dearly-bought privilege, is declared "to be a duty of citizenship" to be enforced by legislating penalty. No government can have any lease for perpetuity that exists by penal compulsion, utter indifference, or the partisan zeal that only votes to win. Patriotism in a democracy must inspire, or self interest and passion will pervert, run down and destroy!

Again, the proposition is to make constitutional modification and abolishment of the rate of interest, or to return to the restriction of the (modernly-ignored) usury laws. All the States, I think, have obviated the old usury restriction by the right of private contract. The assumption of "young America" and of "popular sovereignty" has been and is, that the rate of interest, like the price of all commodity, pertains to renewed "inalienable rights." A century of growth has produced this thing just as the voting principle has become penal duty. The difficulty is not so much in saying what shall be the rate of interest, but it is the penal restraint to be put on this allowed and acquired habit of "right" in the matter. If the "powers that be" may fall back on rigid execution of the old usury laws, there are other duties or functions appropriate to this peculiar power. The laws of the old regime assumed the conceded power to fix other rates as well as money, as the toll of mills, the fees of lawyers, the mileage and prescriptions of physicians, etc, with strict watch over weights and measures. Gold money capital is not an intrinsic value in itself, but is the dispensing and appropriating medium of all values. Thus the per cent. of profits of all trades and mechanical investment is fixed, graduated by the rate per cent. of the invested capital. Then if the price of money is brought down, all the products and profits of its investment, ought, pro rata, also to come down, with hired labor on the pro rata category. Thus, twenty-two years ago, with interest at two and three per cent. per month, teamsters got \$90, and farm hands \$60 and \$70 dollars per month. Within that time, interest has cheapened more than the demands of labor.

This war of labor by the "knights of labor," etc., is not a proposing onslaught against high rates of interest, the oppression of banks, and the money power, but it is against capital in the abstract. It is a crime for a man in excess of personal wants to have money to lend at any rate. It strikes at the propelling principle of human progress, at all laudable ambition to acquire and excel. And the moderate who insist on a double tax on capital, i. e., on the investor and also on the tax and profit paying investment, are instilling the idea.

"All notes, mortgages, and evidences of debt" to be taxed. Then what? If the bonanza kings were personally, by their own agency, to invest their millions of capital in mechanical and trading investment, there would be no notes or mortgages to tax. But the same capital there invested by hired agencies, with notes and mortgaged securities, changes the case—a distinction without a difference. We hear of investment-indebtedness under or by oral promise; in this case what should be taxed?

We should remember that the esthetic glory of Greece and Rome, their statuary, etc., compared with the morals of gross idolatry. So our material progress, patented invention, wealth, etc., may also comport with perverting, destroying elements that may fit us for what Greece and Rome came to be.

The following scrap from the *Popular Science Monthly* suggests the origin of motives: "Are workmen as a class frugal and provident? Do they curb self-gratification, and make present sacrifice for future advantages? How many mechanics or day laborers calculate their annual waste of means on such unnecessary articles as tea, coffee, tobacco, beer, whisky, etc. How many, instead of selecting plain, wholesome, cheap food, spend their extra dollars on pastry, rare fruits, vegetables, etc.? The business done in this line by the grocers and bakers of the lower wards of New York will answer this. I have eaten at the tables of the rich and poor in many States, and my experience teaches me that, as a rule, the well-to-do mechanic lives better than many merchants, bankers and professional men, as long as his wages hold out. The same prodigality is manifested in dress and ornament. They will make any sacrifice to ape the rich or vie with each other. Servant girls often dress better than their mistresses. Who will calculate the dollars wasted by that mechanic's family before

sickness or accident drove him to the poor-house? How much did he throw away on rent that he might live in a better house than he was well able to afford? How many dollars were spent on theaters, balls, sociables, fairs or excursions, that might have been saved?"

Thus it may be said that the greed of acquired appetite, useless self-indulgence, proposes and affects hostile demonstration, not toward the covetous greed of the lender, but against lending ability. C. M. Petaluma, Cal.

Grange Warehouses at Stockton.

The Stockton *Independent* says: Notwithstanding the fact that the Farmers' Union built a warehouse this year 203x162 feet in size, with a side track 800 feet long, and a wharf 200 feet long, they are still cramped for room to handle the wheat coming to the city, and are wishing they had built the new house double its present size. It has been of inestimable service this year, and it would, in fact, have been impossible to handle the wheat we have in Stockton without it. We were down there yesterday, for the first time since its completion, and found it completely filled, wharf and all, with the exception of runways, many of the piles being double the height they originally intended to make them, it having been the intention to pile the wheat but about eight bags high, on account of greater ease in handling and less cost in piling. Another factor in the calculation would scarcely be thought of by a novice; the wheat absorbs more moisture and gains greater weight when piled low than otherwise. Wheat will absorb about two pounds of moisture to the sack, or about 4½% under favorable conditions. The gang of men employed at the warehouse have been kept busy nearly every day until late at night, often until midnight, and nearly every Sunday from morning till night. There are about 5,000 tons in the warehouse now, and much more has been shipped through the house from car to vessel. The building is covered with a substantial roof of tin. The sides are not yet enclosed, and the openness of the structure has given such comfort to the employees on account of the breeze blowing through on the hottest days, that it has suggested a modification of the structure which the company seriously contemplate making this fall. They think that by making a sloping floor about 40 feet wide around the structure, covering it with projecting eaves, it would be unnecessary to enclose the sides at all, as the winter rains could not beat in that distance, and the extra room would be very useful for temporary storage in summer, quite as useful in fact as any part of the warehouse. The other warehouses of the company are rapidly filling up, and they estimate that they have 16,000 tons now stored. The six warehouses of the company cover an area of about 83,000 square feet, or nearly two acres. They will all be required to store the present crop, and the appearances are that all warehouses in the city will be filled.

The State Grange.

The next meeting of the State Grange, which is to commence on the 1st day of October, at Sacramento, should be represented by every subordinate Grange in the State, and attended by as many subordinate members as possible.

There will be business of importance to the Order to transact, and of general interest to be considered. The Constitutional Convention will be in session there, and the delegates representing farm interests in that body should have the moral support, and be aided by the councils of the farmers' organization.

It is fortunate that the two bodies are to be in session at the same time, and in the same place; for the Grange is the only organization in the State representing its great agricultural interests.

The Grange is to some extent responsible for the calling of the Convention, and not to manifest a lively interest in its proceedings would be a stigma on its name.

The able and faithful farmers in that body can and will secure such just and wise provisions (we desire no others) in the new Constitution if properly supported, as agricultural interests require.

A pressure will be brought to bear on the deliberations of the Convention by every other interest in the State. That is as it should be; agriculture, the greatest interest of them all, should not be neglected.

Earnest, honest effort is essential to our success. Come up, then, worthy Patrons, and let us have such a reunion as will give our Order a fresh impetus, and exert its influences for the promotion of the best interests of our State and nation.—*Patron*.

THE HEIGHT OF EUROPE.—Dr. G. Leipoldt, of Vienna, has recently estimated the mean height of Europe at 973.53 feet, from the heights of the surface over Europe. This is somewhat greater than the estimate made by Humboldt, who obtained 672.4 feet.

TRADE dollars have only a billion value, and should not be received for the face. This is not news, but it is well to note it.

AGRICULTURAL NOTES.

California.

ALAMEDA.

FOWLS AND THE SNAKE.—*Independent*: The fowls at Mr. H. Crowell's residence in this place, were observed a few days since standing in a circle, very much excited over some object, which proved to be a snake, 10 or 12 inches long. After several forward movements and as many retreats, a more venturesome fowl, young and courageous, opened the battle by seizing his snakeship and tossing him several feet. The fowls were victorious, and the last that was seen of the snake was its wriggling tail disappearing on its way to the crop of the fowl that opened the fight.

CONTRA COSTA.

SATISFACTORY SHOWING.—*Antioch Ledger*: Geo. W. T. Carter, of Point of Timber, has probably the best and most complete threshing outfit of any one in the San Joaquin valley. In 55 days' work on Orestimba creek, he threshed 47,500 bags of grain to the satisfaction of the farmers, who desire him to do the work next harvest. Returning to Point of Timber, he threshed 4,000 bags of wheat in five days, and has now gone with the machine down the coast counties. Mr. Carter has this advantage over his competitors; he has a camping and cooking outfit, boards his men and is thus independent, to the great delight of farmers' wives.

FRESNO.

EARLY FRUITING.—*Republican*: Mrs. J. A. Smith, of the Central Colony, will pack 100 boxes or more of raisins raised upon vines set out two years ago. She will also have a large number of figs, some of them from trees set out last winter. The growth of trees and of vines on her place has been almost marvelous.

THE THIRD CROP.—Antonia Days, of the large ranch three miles north of Fresno, handed a few ears of corn the other day that he had just gathered as the third crop from a piece of land for this season. The ears were about eight inches long; the grains, red and white mixed, were compactly set, hard and glossy, something like the corn raised in New England. Mr. Days first raised and harvested a crop of onions, then raised and harvested a crop of corn, and immediately planted the same corn gathered on the same land, and in 50 days commenced to gather the second crop of corn. Experiments of this kind serve to illustrate what may be accomplished with water in this vicinity.

KERN.

DESERT LAND.—*Gazette*: We noticed a week or two ago that a franchise had been granted to certain gentlemen to construct a ditch from Kern river canyon out upon the plains below Sumner. The enterprise bids fair to be successfully carried out. Stockton and San Francisco gentlemen are interested. A careful and accurate survey and estimate of the cost has been made. Messrs. Fillebrown and Parke have been engaged to do the engineering work, and after their report is made, if the cost of the work does not exceed \$100,000, it will be proceeded with at once. From a superficial survey made by Messrs. Barker & Botsford, it is believed that the cost will not exceed greatly one-half of that amount. This canal will irrigate 30,000 acres of land taken under the "desert land act," besides the railroad lands and others.

LOS ANGELES.

YIELD OF BARLEY.—*EDITORS PRESS*:—According to promise I send you the yield of my barley crop. I began threshing August 12th, and my barley yielded 25 sacks per acre. My wheat is turning out better than I expected. The early sown is all nice and plump, the late is shrunken. When I get through threshing I will give you the correct account.—A. WORKMAN, San Fernando.

ORANGE GROWTH AT SANTA ANA.—*Herald*, Aug. 31: In conversation with J. H. Gregg, one of our nurserymen, the other day, he said he had never yet been troubled with the scale bug on his orange trees. Some time ago he purchased in Los Angeles a few young orange trees which he found to be covered with the above named bug. He washed the trees frequently with strong soap-suds, watered and cultivated them well, and the scales have disappeared. In speaking of the extraordinary growth of trees, and the adaptability of our soil and climate to the culture of semi-tropical fruit, Mr. Gregg said that he has in his orchard a four-year-old budded orange tree, on which are 400 oranges, all of which he says will come to maturity. He also has a three-year-old budded orange tree, which was set out about a year and a half ago, which has 134 oranges thereon; and a sweet rind lemon tree, three years old, budded, contains 100 lemons.

EARLY FRUITING ORANGE.—Mr. R. M. Hargrave, of Orange, has a sweet Mediterranean orange tree, three years old, and bears at this time 100 oranges. The oranges are large and well developed. The tree was budded on to the China lemon root, and is about three feet and a half high and has a large and beautiful top.

MERCED.

EDITORS PRESS:—The crop of this section is now mostly in the sack. The yield has not been quite up to expectations all round, but perhaps it is as much as we deserve. Owing to the limited number of cars furnished us for

transportation, the warehouses clog up and cause a great deal of profanity, etc., among those who are anxious to ship. There is storage room enough for "dry years," but for such a crop as this it falls short. We had a fire here on the plains, Sunday the 1st inst. It originated from the ash-pile left by Furman & Sons' threshing engine the day previous. Two stacks of grain belonging to Furman and a strip of stubble and sheep range extending from Deadman's creek to the Chouchilla, were burned; loss, about \$1,500. We are having splendid fall weather. Everybody healthy, happy, and getting out of debt, which is as it should be.—J. B. G., Plainsburg, Sept. 2d.

MONTEREY.

A GOAT SPECULATION.—*Index*, Sept. 5: A party of Salinaites, consisting of Wm. Spicer, Jas. Askins, A. I. Abbott, Jim Johnson and three others whose names we have not learned, sailed from Monterey yesterday in a 15-ton schooner bound for Guadalupe island, which lies about 150 miles a little south of west of San Diego. The island, which is 30 miles long and 10 miles wide, is owned by Messrs. Abbott, Boswell & Flint, and has upon it some 60,000 Angora goats, also owned by the same parties. About one-third of the goats are high grade with fine fleeces, and the remainder are of an inferior kind. Spicer and his companions have taken a lease of the island and the goats for one year, with the privilege of renewing the lease for a term of years, if they so desire. They will shear the high-grade goats and kill the inferior ones for their pelts. The owners of the island furnish the schooner and are to receive five-twelfths of the proceeds of the enterprise, leaving exactly one-twelfth of the profits to each of the lessees.

SAN DIEGO.

HONEY FOR EUROPE.—*Union*, Sept. 5: Balcom & Co. made a shipment of comb honey yesterday for Europe direct. It goes by steamer to San Francisco, and thence by clipper ship around Cape Horn. This is an experimental shipment, and is only 600 pounds. It is packed with exceeding care, but a single section in a case, making a 15-pound package. The sliding top patent case is used. These small packages are put in a large double case, the space between the inner and outer case being carefully filled with hay and sawdust. It is expected by Mr. Mumford, the packer, that it will go through in perfect order.

SAN JOAQUIN.

SQUIRRELS AND GOPHERS.—*Stockton Independent*: It may not be generally known that the last Legislature passed an act to encourage the destruction of squirrels in this county. The act provides for a special tax of not to exceed three cents per \$100 valuation of all taxable property, to be levied by the Board of Supervisors for a bounty fund. The bounty was placed at five cents for each squirrel and seven cents for each gopher. When a person brings in the scalps of not less than fifty squirrels or twenty-five gophers, to any Justice of the Peace, the latter is authorized to issue a certificate of the same, which certificate forms a claim against the county to be considered and allowed as other claims, and payable out of the "Squirrel and Gopher Bounty Fund." Any squirrel or gopher hunter has authority to enter any enclosure not occupied as a vineyard, nursery or orchard, between the 1st day of November and the 1st day of May, but not at other times unless permission be granted by the owner.

BEANS IN THE TULE.—The bean crop on Roberts island is likely to be short this year, as for some unaccountable reason the plants do not blossom. They have attained a rank growth, but the flowers do not appear. One man has 45 acres in beans which should have blossomed a month ago, but only a few flowers at the ends of the stalks have yet appeared. They may still blossom freely, but it will be too late for them to mature fully this season. Beans have heretofore been a most prolific crop on the island. Alfalfa and onions are thriving well, but potatoes, especially the late sown ones, are rather short. Irrigation is needed, as the entire upper division is said to be as dry as a bone, and water cannot be reached within five feet of the surface. Tules have but a precarious existence in this condition of affairs.

FATAL DISEASE IN ANIMALS.—Mr. W. L. Overhiser has been kept pretty busy during the past two weeks doctoring his cattle and hogs, two distinct epidemic diseases having appeared among them about the same time. He first lost the most valuable bull he had on the ranch, "Twenty-sixth Grand Turk," but is not sure that its death was caused by the disease which afterward appeared in his herd. A valuable Short-Horn heifer was next attacked and died. On dissecting her it was found that the second stomach was filled with dry food, compacted so hard that it could not pass through its natural channels. This disease is known as the dry murrain, and it is said to be caused by eating too much dry food. Having ascertained the nature of the disease, Mr. Overhiser was able to treat the others intelligently, and lost but one more, his favorite heifer. He placed his entire herd in the stables and corral, giving them a thorough drenching with epsom salts. He is satisfied that they are now entirely out of danger and as well as ever. Had he not taken them in time, the disease might have swept off his whole herd. His hogs were attacked about the same time with a disease resembling diphtheria, but called by farmers the quizuy. It

was observed that the hogs would sit on their haunches, breathing hard, while their jaws were very much swollen and inflamed. After two had died he found that 30 in all were afflicted. He at once applied the remedies suggested by experienced persons, but was unable to save any that was attacked. He administered a compound of sulphur, charcoal and arsenic to the remainder of the drove and succeeded in preventing a further spread of the disease. From the results of his experience he is of opinion that an ounce of prevention is worth several pounds of cure. He has entirely and effectually checked the diseases in his stock, and now there are no diseased animals on the ranch. He valued the stock that died at about \$3,000, which is bad enough, however much worse it might have been.

CRANBERRIES AND SUGAR CANE ON BOULDER ISLAND.—Henry Voorman, of the Pacific Refining and Distilling Company of San Francisco, proprietors of Boulder Island, writes as follows: Mr. Nyland, who has had many years experience in cranberry culture in New Jersey, has quite a number of cranberry plants now growing on Boulder Island, where they seem to thrive remarkably well. We intend to make a thorough test of the culture of this valuable plant on the island, and to others desiring to do likewise, Mr. Nyland will cheerfully give any information sought. Sugar cane will also be tried next season. I have planted a few cuttings this summer, and intend to bring a large number of cane cuttings from Fresno, where I started two years ago with about 1,000 plants; but owing to the sandy soil and insufficiency of water, they did not grow as well as I anticipated. I succeeded, however, in getting a large number of seed cuttings.

SAN LUIS OBISPO.

CROPS.—*Tribune*, Sept. 8: The general indications around the county are that our wheat and barley crops are turning out much better than was at first supposed. The bean crop is simply tremendous, and should prices continue favorable for two months to the producers, there will be plenty of loose change afloat in this county. Several of our farmers experimented with oats this season, and are now satisfied that it is a sure and safe crop for this section of the State. On the Nipomo Rancho they have been hauling six tons a day to Price's beach for shipment to the city, within the last two weeks and are not yet through. Immediately alongside of the oats was sown wheat, which was completely destroyed by the rust, whilst the former escaped entirely.

SANTA BARBARA.

EDITORS PRESS:—The crops are generally looking well this season here, especially beans and corn.—B. W. C., Lompoc.

SANTA CLARA.

GLANDERS.—San Jose *Mercury*: Dr. McMahon, the Coroner, yesterday discovered at the Scandinavian hotel in this city, a man named Goedes, who was lying dangerously ill from that malignant equine disease, the glanders, which when communicated to a human being generally proves fatal. The man had been working on a farm in Milpitas, and while there contracted the disease, which was prevalent among the horses. He was removed to the county infirmary, and the chances are that he will not survive.

SOLANO.

ORANGES AND LEMONS.—**EDITORS PRESS:**—Calling recently at the ranch of Mr. L. E. Rose, near Benicia, Solano county, I saw in his small collection of fruit trees, figs, pomegranates, a Japanese persimmon and 24 orange and lemon trees, all in a thrifty condition, together with temperate climate fruits. None but the lightest of frosts, and they very rarely, have ever been seen on Mr. Rose's ranch and the ranch adjoining on the southeast. Most of the trees are on a low slope of ground, a few on a rich, moist piece of land extending to tide water, the lower part daily overflowed. The orange and lemon trees were raised from the seed and afterward budded by Mr. Rose. They are three years old, many an inch and a half in diameter and three feet in height. One tree grafted a year ago has grown three feet in that time. The trees on the higher ground are sometimes irrigated, but otherwise no extra care is taken of them. They have a bright, healthy green color and seem to be well suited to this locality. Land planted to orange and lemon trees in this vicinity would no doubt pay handsome profits and far greater than anything else to which the land could be devoted. The land is sheltered by hills.—H. E. H.

SONOMA.

DISEASED HORSES.—Sonoma *Democrat*, Sept. 7: Seven head of horses on George Hood's ranch, in Knight's valley, have become afflicted with some kind of disease that makes them almost crazy. They may remain standing quietly for some time, and then suddenly commence kicking furiously until perfectly exhausted; and often when in harness and at work, the same symptoms attack them and render them useless. A veterinary surgeon from Petaluma visited the ranch last week, killed one of the horses and dissected him. He found the brain perfectly intact, and no traces of rattleweed or any other poison in any part of its anatomy, and declared that he could not tell what ailed them. Other horse raisers have been called upon, but have arrived at no decision. A singular part of the affair is that the disease is confined to Mr. Hood's ranch, and does not as yet affect the horses of any neighboring farms.

A WARNING TO STOCK RAISERS.—*Healdsburg Enterprise*, Sept. 5: By reference to a card in our advertising columns it will be seen that some of our mountain men came near being swindled by one A. E. Pryer, who bargained for a number of cattle at a certain price, the money to be paid upon the delivery of the stock at Geyserville. Truitt & Rickman drove a band in from the mountains, met Pryer at the above place, and he wanted to receive the cattle and take them to San Francisco, saying that he had been disappointed in receiving his money and would send it up. This, of course, they refused to do, whereupon Pryer said he would go to the city, get the money and return for the stock. Truitt & Rickman waited ten days for him to return, being under quite heavy expense to feed their cattle, and finally they came to the conclusion that Pryer was a swindler and a fraud, whose object was to get the cattle to San Francisco, where he could sell them, pocket the money and decamp. That he may not succeed in swindling confiding stock men in other quarters, we hope the press will pass him around.

A HEALDSBURG HOP YIELD.—*Flag*, Sept. 5: Whole families from town are camped in the Grant and Born hop field. Dave Williams is the weigher and reports about 60 at work, and more good pickers wanted. There will be about four weeks' work, and a good picker can make \$1.25 per day, picking 100 pounds. The pickers report the hops smaller and easier to pick than last year, on account of the absence of so many leaves. The hops are of fine quality.

TUOLUMNE.

COFFEE.—*Independent*: Stefano Cayaganaro, at Squabbletown, a half mile or so northeast of Brown's Flat, has a fine patch of coffee, raised from the seed. The bushes are about five feet high and well loaded with berries. He has about 20 rows, each 50 feet long, the rows being two feet apart and the plants one foot apart in the row. He says the coffee will be ripe soon, and he expects about 100 pounds from the patch. The beans were planted in April about two inches deep, with no more care than common field culture. Fortunately he had no frost to contend with, which would have been fatal to the plants. Several years ago Mr. Fischer, at Blanket creek, raised some coffee, but a second trial was defeated by frost.

Hollisteria—A New Genus of Plants.

EDITORS PRESS:—The discovery of new genera of plants, as the country is being more and more explored by sharp-eyed botanists, is not so common but what I may be pardoned for what follows:

I have the pleasure to announce that a plant found in Cholame valley, in the southeast corner of Monterey county, July 8th, and by me supposed to be an undescribed species, proves, upon sending to Dr. Gray, to be the type of a new genus. "Curious, beautiful and a good genus," Dr. Gray states.

The species by which the new genus is represented is a pretty, white-wooly, yellow-flowered, sparsely-prickly plant, spreading flat upon the ground on a warm, sandy slope. The genus belongs to the *Eriogonaceae* section of the order of *Polygonaceae*, all sand and sun-loving plants, some of them of much beauty.

At my request the new genus has been named *Hollisteria*, and dedicated by Gray and Watson to Col. W. W. Hollister, of Santa Barbara, in recognition of his distinguished patronage of science. The specific name *lanata* is given on account of the woolly appearance of the present species, *lana* being Latin for wool.

J. G. LEMMON.

Yosemite, September 1st, 1878.

THE State Government of the United States of Colombia gives 50,000 people four polling places and then fires on them if in the crowd and excitement there is any disturbance. The election goes for the government.

It is thought that there are good gold mines near the Butte creek forks, Butte county.

Signal Service Meteorological Report.

Week Ending September 10, 1878.

HIGHEST AND LOWEST BAROMETER.						
Sept 4	Sept 5	Sept 6	Sept 7	Sept 8	Sept 9	Sept 10
29.86	29.96	30.03	29.97	29.93	30.01	30.05
29.82	29.89	29.97	29.86	29.86	29.95	29.98
MAXIMUM AND MINIMUM THERMOMETER.						
78	63	62	68	77.5	73	68
58	55	55	52	56	54	54
MEAN DAILY HUMIDITY.						
67	83	80	77	60	83	80
PREVAILING WIND.						
SW	SW	SW	SW	SW	SW	SW
WIND—MILES TRAVELED.						
213	365	287	185	100	224	245
STATE OF WEATHER.						
Clear.	Fair.	Fair.	Fair.	Clear.	Fair.	Fair.
RAINFALL IN TWENTY-FOUR HOURS.						
Total rain during the season, from July 1, 1878, .01 in.						

Gold, Legal Tenders, Exchange, Etc

[Corrected Weekly by SUTRO & CO.]

SAN FRANCISCO, September 11, 3 P. M.

LEGAL TENDERS IN S. F., 11 A. M., 93@99.90. SILVER, 12@1.60. GOLD IN NEW YORK, 100@.

GOLD BARS, 89@92.10. SILVER BARS, 8@15 cent. discount. EXCHANGE ON NEW YORK, 1%; on London bankers, 49@49. Commercial, 50; Paris, five francs @ dollar; Mexican dollars, 91@92. LONDON CONSOLS, 94 15-16; Bonds, 108. QUICKSILVER IN S. F., by the sack, @ 1b, 41@42c.

News in Brief.

LANCASHIRE cotton mills are closing. A WATER-SPOUT in Hungary killed 300 persons.

REPUBLICANS carried Vermont by 17,000 majority.

GEN. JOHN C. FREMONT is on the way to Arizona.

Good hop pickers can get \$3 per day at Puyallup, W. T.

THE McCloud river salmon supply is larger than ever before.

THE western boundary of Jarupa Rancho is to be resurveyed.

GLANDERS among San Francisco horses seems to be on the increase.

CATTLE in large numbers are now being shipped East from Wyoming.

ALL but two of the large saw-mills on Puget sound are running on full time.

THE Nonpareil quicksilver mine in Douglas county, Oregon, has a tunnel in 330 feet, and will soon build smelting works.

SOLDIERS from the North and South meet in friendly union at Marietta, Ohio.

OBERLIN college has conferred the degree of A. M. upon nine lady graduates.

LARGE tracts of good land await settlement in the region of Cowlitz Pass, W. T.

JOHN BIDWELL, of Chico, California, has been awarded a prize at the Paris Exposition.

THE artesian well of Charleston, S. C., furnishes more water than the city requires.

SALES' gold mine, Georgia, has, without machinery, yielded \$10,000 since January 1st.

POSTMASTER Gen. Key and friends will visit the State fair on the 19th and 20th instant.

GOLD is found in Oglethorpe and Murray counties, Georgia, as well as in Lincoln county.

IT cost Santa Clara county over \$1,400 to elect delegates to the Constitutional Convention.

THE International Monetary Congress recommends a universal standard of one-tenth alloy for gold coins.

THREE Portuguese have been fined \$50 each for taking salmon out of season from the Sacramento river.

THE rinderpest is rapidly extending throughout Roumania. The authorities have not been prompt enough.

ISAAC BROWN, an octogenarian of Jefferson county, Ala., has ploughed the same field for 62 successive years.

THE Oxford Iron company of Oxford, New York, have failed. Estimated liabilities, \$5,000,000 to \$6,000,000.

IT is estimated that Delaware's peach export for the season will amount to 700,000 baskets, netting the shippers \$575,000.

IN Cincinnati it is said 20,000 kerosene lamps have been sold within the last three months, and 4,000 gas meters taken out.

THE cotton spinners of Northern France have resolved not to work by gaslight, in order to lessen the accumulation of stock.

SECRETARY Schurz declines to interfere with the Land Commissioner's decision opening the large railroad grants to settlement.

LANDS near the line of the Utah N. R. R., in eastern Utah, are being rapidly settled. Farm land by the thousand acres lies idle.

THE New York water supply system has cost since 1842, to complete and maintain it, \$34,000,000. Total revenue, \$30,000,000.

SIR GARNET WOOLSEY took 6,000,000 pounds sterling to Cyprus to pay for the construction of harbors and other government works.

AUGUST 31st, the El Dorado South hoisting works and quartz mill at Belmont, Nevada, were destroyed by fire. Probably incendiary.

THE internal revenue tax collections for the fiscal year ending June 30th, last, were \$104,717,437 accounted for, and \$9,705 unaccounted for.

IT is thought that an extensive system of smuggling between England and the United States, is carried through the Mexican Free Zone.

THE Los Angeles Company's well in the Little Sespe canyon has now reached a depth of 1,250 feet, and has penetrated oil-bearing strata.

SEPTEMBER 4th, call was issued for redemption of 5,000,000 of 5-20 bonds of 1865, consols of 1865; 2,000,000 coupon and 3,000,000 registered bonds.

A NEW bonanza has been found within two miles of the Azatlan mill, Prescott, Arizona, which assays from the croppings, in gold and silver, \$152 to the ton.

IN the Thames, September 3d, an excursion steamer with about 700 passengers was cut in too and sunk by collision with a propeller. Between 600 and 700 were lost.

AMMONIA from the commercial fertilizers manufactured in the suburbs of Augusta, Ga., has completely driven out chills and fever and other malaria from the region.

CLEARING House returns from 23 cities for August, as compared with the same month last year, show a loss of 8.8%. Kansas City has the largest loss; San Francisco, the largest gain.

THE English and American governments are petitioned through the instrumentality of the International Congress on Weights, Measures and Coins, to consider the adoption of the metric system.

WOODWARD'S Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a boa-constrictor have just been added. New stars are constantly engaged for the Pavilion exercises. Rates of admission as usual.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING AUGUST 27TH, 1878.
SEED PLANTERS.—Wm. T. Easterday, Watsonville, Cal.
PROCESS AND APPARATUS FOR MANUFACTURING WATER-GAS.—Watson A. Goodyear, S. F.
BROOMS.—Wm. Walter, Arcadia, Washington Territory.
STENCH OR BASIN TRAP VALVES.—Wm. E. Worth, S. F.
TUBULAR NEEDLES FOR EMBALMING.—Samuel Rodges, Los Angeles, Cal.
GRAIN SEPARATORS.—John W. Young, Union, Oregon.

DOUBLE PROPELLER PUMP.—The attention of visitors at the Mechanics' Fair has been directed to the Follansbee Double Propeller pump by the enormous and continued stream it pours forth. It is one of the most powerful lifting pumps ever put before the people, and is so simple that any one can see at a glance what its capabilities are. It requires no oiling, and any one of them over six inches in diameter can have an engine attached direct and thus avoid the use of belting, which makes invaluable for wrecking purposes, pumping water out of vessels and irrigating and draining work. It will be on exhibition at the State Fair also, and the agent or the Follansbee Pump Company, Boston, Mass., will send circulars and furnish pumps of any size. Manufactured at Golden State and Miners' Foundry, First street, San Francisco.—*Fair Catalogue.*

THE principal place of business of the Klamath quartz mining company has been changed from Siskiyou county to San Francisco.

The California Sack Holder.

Among the many new inventions and labor-saving contrivances that have been introduced to the public, there is none that recommends itself so fully and readily as the California sack holder. By its use the labor of one man is saved, and the sacking of grain instead of being the tiresome "back-breaking" work as heretofore, becomes light and agreeable. In fact a boy can operate it as well as a man. The sackholder, like most of the more useful inventions, is very simple in its construction, and it is next to impossible to get it out of order. Its light, weighing but about 17 pounds, and will last though constantly used for years. It is adjustable to any sized sack, and allows no wastage whatever. We consider that it is one of the most useful California inventions we have seen. The patentees deserve to realize the handsome profit we predict for them, and we feel warranted in making the prediction from the large number of people who nightly examine its practical workings at the Mechanics' Pavilion, and the great number of orders the agents are receiving.

UNION READING ROOMS, FIRST STREET, SAN JOSE. WELCOME TO ALL.—Having lately been removed to the old hall of the City Zouaves, this institution is located in a pleasant and spacious apartment. The latest and best periodicals of the day are found on its tables, free to all. Also many choice volumes upon its shelves. Good music is provided for every Wednesday evening's social. Admission to these entertainments, 25 cents—to pay expenses.

WANTED, by a middle-aged woman of education, a position in a respectable farmer's family. Would make herself useful. Salary small. References. Address, Industry, office RURAL PRESS.

A Country Store Wanted.

— AT —

GLEASONVILLE, TEHAMA CO., CAL.,

May be found a good place to open a country store. We have just finished a splendid new building. It is now ready for goods, and we will rent it on reasonable terms. This place is in the midst of a rich farming country, where crops have never been known to fail. The nearest stores are from 15 to 18 miles distant.

The town of Gleasonville has a good hotel, blacksmith and shoe shop and saloon, but no store. The storekeeper could use from \$5,000 to \$10,000 to advantage, but can do a good business with less. A good man with money to command is wanted to open the store.

Address, GLEASON & MASON, Gleasonville, Tehama County, Cal.

A Good Dairy Ranch For Sale

On Bear River, Humboldt County, Cal., containing 600 acres of as good grazing land as any in the State. New Dairy and Dwelling House. The land is well watered, and plenty of timber for firewood and shelter, and well fenced. I will also sell with the ranch 100 head of choice dairy cows and fine horses. Price, \$13,000, one-half down, the remainder on easy terms for one, two or three years. Apply either in person or by letter to RICHARD JOHNSTON, Post-office address, Myrtle Grove, Humboldt County, Cal., or to R. J. JOHNSTON, No. 1,324 Howard Street, San Francisco.

DUTCH BULBOUS ROOTS

AND

SMALL FRUITS.

Our AUTUMN CATALOGUE of the above, beautifully illustrated, will be ready for distribution Sept. 1st. A copy will be mailed to all applicants. Address,

B. K. BLISS & SONS,

SEED, PLANT and BULB WAREHOUSE,

P. O. Box No. 5,712. No 34 Barclay St., NEW YORK.



A Winter's Night.

(Written for PACIFIC RURAL PRESS by PHILMORE.)

Dear Ben, how few at present know
What hearthstone meant long ago,
When you and I were boys.
The very backlogs of those days,
With hickory fagots all ablaze,
Illumed our homely joys.

The brazen fire-dogs silent stood,
The forestick both at once bestrode,
And sung and sputtered long;
The live coals glowed beneath it all,
Anon the severed firebrands fall
And cease the forestick's song.

The angry blaze mounts upward quick,
And sparks fly outward fast and thick
As pent up lightning flashes;
Close to the backlog, glowing red,
The live coals find their nightly bed,
All covered up with ashes.

The candle on the stand burns low;
Against the panes the flakes of snow,
And driving hail and sleet.
The frosty air comes creeping in
Through every crack and clapboard thin,
With steady, noiseless feet.

There, gathered in a circle round,
The family at home are found,
All bent on one desire;
The wintry storm without assails;
Within the wish that most prevails
Is getting near the fire.

Close and closer still they pressed;
At length the children were undressed,
But not a whit too soon;
For colder grew the frosty air,
And back was put each vacant chair,
To give the others room.

But two remained at last to dread
The icy coldness of their bed
And listen to the storm.
The heating pan was then bro't forth,
So well was known its real worth
To make the bedding warm.

At last the sickly candle dies,
The last spark up the chimney flies,
And all have gone to bed.
Where are they all at bedtime now?
"Around the hearthstone," sayest thou?
Nay, most of them are dead.

True we are left, but growing old;
The night approaches and the cold
When we must to our rest.
We ne'er may meet again on earth,
But may we ne'er forget the hearth,
Where we in youth were blest'd.

And if we reach that better sphere,
May not our spirits hover near
The hearthstone of the past?
There meeting, as in days of yore,
The dear ones that have gone before,
Be welcomed home at last.

Home Live Stock.—No. 1.

(Written for the PRESS by MRS. RANCHER.)

Not the live stock at the barn or shed. That has been, and is and will be ably discussed week after week. It is of the live stock we shelter at night under the house roof, I wish to write.

Can we not give more attention, with great profit to this subject, for is it less important business to raise boys than colts, to bring up girls in the paths of virtue and rectitude than to have a fine flock of sheep?

Perhaps there is not a mother who reads the "Home Circle" columns of the RURAL, but could advance some good idea on the subject, and if these units of good ideas could be collected here, week by week, and could be utilized by the present and future mothers, what a grand result might be obtained! What a solution to the hoodlum question.

I say future mothers advisedly, for it is a hobby of mine that girls should understand somewhat of the care of children before marriage, as well as to learn to cook or wash or sew.

A baby ought to be a thing of joy, but a crying baby can scarcely be that. Yet it is often the mother's fault that baby worries. Keep the little one warm, but do not overload it with stiff shirts. Keep it dry. Strive to feed it regularly and not too often. Even if quite small it wants a sip of water ever and often. Give the little feet a free chance to kick. If it cries, do not always begin at once to nurse it, unless it is hungry. How would you like to be fed if you had the stomach ache? Walking the floor with a child is another bad practice. Strive to find out the cause of its cries and remove it. A pin may be pricking the tender skin, and though, as you wearily pace up and down, its cries may cease, it would be better to remove the pin.

[Sew on the little garments which have to be fastened around the body and use only "safety pins" elsewhere. It only takes a few stitches and hardly more time than putting in pins properly. No one who has tried this will ever use pins afterward. When our babies cry, we

know it is not a pin.—MRS. EDITOR.]

Besides giving heed to these little details, mothers should not work too hard. "How useless to tell us that," cries some overburdened one, "she can know nothing of the work on a ranch."

Ah, my friend, am I not Mrs. Rancher, and do I not know of the thousand and one duties that fall to our lot, of which our city sisters do not even dream? But there are some unnecessary ones, so that it is quite possible that the thousand might be greatly reduced if we would constantly watch.

As it is of no use to counsel improvement without telling the "howfore," I will next week tell you of a few ways in which to save labor and steps.

The Fisherman's Wife.

(Written for the RURAL PRESS by NICOLE STRONG.)

The sun was sinking slowly down into the ocean, and its last rays were sending many rainbow-hued lights which danced and sparkled over the quiet waters like fairy sprites. To the left and way off in the misty distance a low range of hills is just visible, growing more and more distinct as they stretch farther around the crescent bay. Along the shore immense piles of rocks lift themselves up against the sunset sky, their dark ragged outlines startlingly distinct. At intervals the smooth, sandy beach reaches down to meet the waves, which ever and ever sweep over it, leaving there their treasures, delicate sea-weed and many-hued shells.

No sound broke the peaceful quiet of the twilight hour, save the angry roar of the waves as they ceaselessly dashed themselves against



"All day long and day after day she waited and watched in vain."

the rocks, and then slowly reeled with a sullen moan. Now and then the flap of some seabird's wings is heard, as it flits from rock to rock, eager to pounce upon the little fishes which the pitiless sea is tossing up.

But what is that strange figure which stands so motionless on one of those jagged shelves of rock, looking earnestly over the broad ocean? Presently, with a weary movement, the figure turns and begins a slow descent over the slippery rocks. It is an old woman, whose bent and feeble frame trembles as she carefully picks her way. Approaching her I see a dark, wrinkled face, framed by thick locks of snow-white hair, which do not hide the little, piercing black eyes. Her dress is literally rags, her feet bare, and around her head is tied an old black turban.

Muttering to herself, she reaches the base, and slowly seats herself, with hands crossed on her knees and head sunk low on her breast. I approached and addressed a few words to her, but she paid no attention. I proceeded on my way, and in the little village below they told me her sad story.

Thirty years ago, this poor creature was the happy wife of an honest, well-to-do fisherman, and the proud mother of two beautiful boys. On one bright summer day, the father, with his sons, sailed blithely away in their little boat, the lads waving their hands in gay farewell to their fond mother, who watched from the shore, standing there until the boat faded away in the distance, and straining her eyes for a last glimpse of her dear ones, alas! the last in many a long, long year. For the little boat, with its precious freight, never returned to gladden her waiting eyes.

A sudden storm arose, and the winds raged and the waves dashed. When the sea was

smooth again, all day long watched the anxious wife and mother; but all day long and day after day she watched and waited in vain, for no news ever came to her of her lost ones.

The weary months lengthened into years, and the years crept slowly onward and still the faithful mother watched. Crazed by her loss, she became the wreck I have described, and wanders up and down the shore, still waiting and hoping that some day her long looked for treasures will return.

Pen Portraits of Pictures.

An accomplished lady critic has described the art exhibit at this year's Mechanics' Fair for the *Fair Daily*. The articles are too long for our use entire and much of the criticism would be unintelligible without a chance to view the pictures. We find, however, some little sketches of pictures which will be fresh and interesting anywhere:

The art exhibition is somewhat superior this year to that of any preceding year, considering the general merit of a majority of the paintings.

Nos. 7, 8 and 9 form a noticeable group of pictures, which bear a striking resemblance to one another. The artists are Yelland, Hahn and Bush (R. J.). "In the Adirondaeks," by Yelland, is a dreamy autumn scene, with a wooded bank in the foreground, covered with autumn foliage, while a long lake extends toward the hills in the background. The sky is dappled, and the gray masses of cloud are reflected in the water. The autumn tints of the foreground give the predominant coloring to the picture, tempered on the distant hills and on the farther shores of the lake, by the haze which hangs over all the distance. The management of atmospheric effects throughout the scene is one of its most subtle sources of power, for it communicates to the observer the delicious sense of dreaminess and rest which belong to an autumn afternoon, when the air moves languidly, and the imagination is stimulated by the luxuriousness of surrounding colors. The more we study this painting, the more we are impressed with the genuine artistic feeling of the painter. And there is nothing in the execution of the picture to mar the poetry of its conception. Trying as heavy autumn tints are to other colors, they are well sustained by the soft gray of the sky, repeated in the water. All the shading is delicate, and the grouping of the different parts of the picture is elegant as well as graceful. The bank of trees and vines show careful study, and yet little effort is displayed. This concealment of laborious effort is a great test of artistic ability, as well in painting as in music or the drama; and although Yelland may be idealistic at the expense of exact reproduction of nature, he paints with real delicacy and power.

With which verdict of almost unqualified admiration, we turn to the other two pictures of the group. The upper one is "Clond's Rest," by Hahn; the scene is the snow-covered top of a mountain, upon which is a trail, with two parties of tourists, one ascending the other descending. The figures have little character, although there is an evident intention to introduce activity into the scene. It is apparently a literal copy from nature, and its chief value lies in the associations it may have for mountain travelers. The shadows on the snow are to us the most interesting part of the picture, although we recognize merit in the truthfulness of the artist to the very ordinary appearance of tourists under those circumstances. The idea of the painting and its expression are as thoroughly practical and devoid of sentiment as the rest of Hahn's works, but it is not therefore uninteresting. There is a business-like air about it, which, although not engaging from an aesthetic point of view, has its value from a human standpoint. The subject is one which would require great self-denial on the part of a sensitive and cultured artist, if he omitted its many opportunities for effective scenery, or even for good-natured sarcasm; but Hahn has preferred the literal to the figurative, and perhaps he is to be congratulated.

Immediately underneath the "Cloud's Rest" is the third picture of the group, Bush's melancholy painting, "Astray." It is the only one by this artist in the gallery. The subject is a hillside, on which a stray lamb and its ewe are following a deserted cattle-trail. On the right is a deep gorge, walled on the opposite side by dark, perpendicular cliffs. The yellow stubble, the bare rocks, gray cliffs on the left, birds of prey swooping over the lamb—all accord well with the homelessness of the scene. The sky is clouded, and the coloring of the picture is appropriately cold. The one suggestion of health and happiness is in a very green tree on the left, whose roots are watered by a little pool of water caught in a hollow. This gives spirit, perhaps, but it is not necessary to the sentiment of the picture. Against the dull, slaty cliffs is outlined the ghastly figure of a dead branch from some fallen tree—a little bit of pathos which might have been emphasized with good effect. The painting is not a very highly finished one, but it shows sensibilities on the part of the artist, and a good deal of imagination.

These three pictures, happening thus to be neighbors, represent three orders of painting which include a majority of the pictures in any gallery—the idealistic, the realistic, and the

combination of the two which is so common, and yet offers so much material for good painting.

Straus has a striking painting of moonlight in the Dismal Swamp, showing the tall trees and their rank undergrowth, in the foreground, and, through an opening, the thick, black waters of the swamp, lighted by a low, white moon. One can almost feel about him the noxious vapors that characterize the place, and the dark-green mass of tangled vines looks as if, in a moment, innumerable slimy things would crawl out. The trees are hung with long moss, and the coloring, a nameless kind of green, unvaried throughout the picture, gives an appropriately damp effect. A tiny waif of a boat, with a sail dangerously tall, plays the part of slim, white spectre in the scene.

"Gaioth, Bein Isle of Anan," is the title of Wandesforde's scene in the mountains of Scotland. It represents a little stream flowing between cliffs that rise in higher and higher ledges toward the background of the picture, until the water-course curves, and we see the peak of a distant mountain that culminates all. The scene is thoroughly poetical, and the coloring is so very delicate that the picture is charming at first sight. A faint cloud of vapor rises from the stream and crowns the mountain top with a glory of purple haze. In the foreground the rocky cliffs and ledges are noticeably well finished, and the coloring is a delight, however long we look at it.

Deany is the painter of "Drifting About," a very desolate scene, representing a wrecked and deserted vessel adrift on the sea with flocks of sea-birds for occupants. The ship and the stretch of water form the whole scene. The time is sunset, and the sky is of that intense blue, shading into green and gold, which is often seen with a red sunset. There is just enough motion in the water to show that the sea is quiet, but a vast power is latent in the slow heaving of the waves. As a marine sketch it is unquestionably good, and has the advantage of not attempting too much. There is a great deal of dignity in the composition of the picture, and we admire the good taste which omitted the deplorable human figures which harrow us in most painting of this kind.

Straus has a very neat scene in which improved methods of harvesting in Alameda county are given in detail, including the apparatus for cooking lunch. The long reach of valley, circled by low hills, is very literally descriptive of scenery in that county; and the picture may be very valuable some day, either as an advertisement or an accessory to some history of agriculture in California.

"The Quilting Party," by Perry, is one of several studies of English domestic life among the laboring class of people, where the women grow weary and hopeless looking before the gold is gone from their hair. This scene represents a grandmother and her daughter engaged in quilting in the old fashioned way. The daughter is breaking off the thread with her teeth; and she has an absent, far-away look in her eyes as if she were utterly tired of the insignificant life she leads, and were now, for the hundredth time, watching her hopes of change die out. The grandmother bends intently over her work; her hand is brown and worn with constant labor, and her face shows the firmness that has put aside all the longing her daughter is feeling now. Many a mother has paused before that picture, and has seemed more moved by the old lady's determined face, from which all dreams of anything happier than her quilting have long ago gone, than by the most elaborate landscapes, or ideal scenes. Young people pass Perry's pictures by because the women are not pretty, the carpets are evidently homemade, the walls are papered with homely colors, and the whole scene is trying to youth's predilections. But married people, particularly the partially happy, more thoughtful class, see in these pictures more than the furniture and the red-haired women; more than the apparent meaning of the scene; more, perhaps, than the artist knew he was painting.

Virgil Williams exhibits a very pleasant view from Knight's Valley. Not impressive in any way, the picture passes for just what it is, careful, consistent, realistic. The artist's interpretation of natural scenery of this kind is often as much of a study for the observer as the scene itself, and the same even tone, the same objective mode of treatment appears in all of Mr. Williams' pictures. This particular sketch is harmonious and graceful throughout, but it is without feeling. Some admirable groups of foliage attract attention, and the perspective is so accurate that, as you look at the picture, the scene grows broader and higher, until it covers the whole space before you, and you can imagine yourself in the valley itself. Not every picture has this power, nor is every landscape painted with the quiet dignity which is apparent in this.

A DISSIPATED young man, who ran away from home and spent his substance in riotous living, resolved at last to return to the paternal roof. His father was kind enough to forgive the young rascal for his wickedness, and rushing into the house, overcome with joy that the boy had returned, cried out to his wife: "Let us kill the prodigal; the calf has returned!"

A LUCKY number: Fortn-S. A stupid number: Asi-9.—*Phila. Bulletin*. A warm number: Red-0.—*Boston Post*. A surprising number: 1-der.—*Alta*. A painful number: 2-thache.

Chaff.

A sober man is God's rarest work.
IRREPRESSIBLE conflict—between women and fleas.

GROCERS give short weight to make up for long wait.

"THE Three Mosquito-eers" is a favorite play in New Jersey.

"MAN over-board!" he shouted when a book agent froze to him.

THE Providence fire lighted up the whole State of Rhode Island.

They who "pine" in their youth can never look "spruce in old age."

ALL honest men will bear watching. It is the rascals who cannot stand it.

ROBINSON Crusoe's island is being raised and refurbished by country papers.

"My love for you is as warm as St. Louis," is the way a Michigan lover writes.

THE fellow who signed the bill first and passed it afterward, is at Salt Lake.

A BOY says that when he eats watermelon his mouth feels as if it were in swimming.

ONE swallow does not make a spring, but a dozen swallows sometimes make one fall.

GOVERNMENTS rarely like to do low menial work, but often aspire to hymenial labor.

To fly or not to fly is the question of the day, and but a mere matter of opinion at most.

PULLMAN Palace Car Company's treasurer ran off—an Angell flying with \$50,000 in gold.

If you don't want to be robbed of your good name, do not have it painted on your umbrella.

Edison is inventing a five-cent cigar that will smell different from burnt rubber and old rags.

PAINTERS who make their bread from their art are excusable for making rocks look like dough.

ALAMEDA horse-car propellers are encouraged by a "running mate." Four miles an hour is the result.

THE coquette is a rose from which every lover picks a leaf—the thorn is left for her husband—if she ever gets one.

THE poker player who bets his pile on three queens, learns by sad experience what the divine right of kings is.

THE chap who ate a pint of cherries in the dark, a few nights ago, thinks it was the wormiest night of the season.

SOME paper tells us, gravely, that cold corned beef is best for hash. If that is so, why will they continue to make it of flies?

A CONNECTICUT woman was appointed constable the other day, and the first thing she said was, "Now I shall catch a man."

BEING asked what made him so dirty, a street arab replied, "I was made, so they tell me, of dust, and I suppose it works out."

The evenings are lengthening, and so are the arms of our young men—they now begin to reach clear around the girl's waists.

A YOUNG lady in Wisconsin refused an offer of marriage on the ground that her father was not able to support a larger family.

THE Chinese understand culinary operation when applied to rats, dogs, etc., but it is said they are woefully deficient in eat-a-cat.

A PIECE of paper, cut round, applied to the palate is said to stop nose bleeding at once. Painters better paste a piece on at once.

A WESTERN editor declares that he wears no man's collar. Certainly not. What would a Western editor button a man's collar to?

A man in Detroit has recently invented an apparatus for arresting and extinguishing sparks. Are the girls going to stand that?

"Go North, young man," says the Boston Post to Mr. Bennett; "go North and freeze up with the country." Is this warm friendship?

IN NINE cases out of ten when a man marries a sensible woman, it is after having been severely disappointed in an ardent desire to marry a fool.

"CLERGYMEN" remarks an exchange, "like railway brakemen, do a great deal of coupling." Ah, yes; and the coupled ones do all the switching.

"At what age were you married?" asked she inquisitively. But the other lady was equal to the emergency, and quietly responded, "At the parsonage."

YOUNG men of the middle class are getting so sly and hard to catch, that parents will have to begin to offer chromos along with their marriageable daughters.

It is estimated that our liquor costs us \$600,000.—*Isanti Press*. We don't know of another editor who could afford to go it that strong.—*St. Cloud Journal*.

CONNECTICUT and New York are quarreling over a shovel full of dirt. If they dig it up and take it into court, one or the other will fall through the hole.

THE following characteristic note was received by an express company: "For watt make me Paid one Time 46 and this oulder Time 50 cents for the same weight?"

A MINNESOTA father, who has five grown-up daughters, has sued the county. He claims that his residence has been used as a courthouse for the past two years.

A young man, just returned from New York, when asked where he put up, said he didn't know the man's name, but there were three balls in front of the door. He "put up" his watch to raise funds to get home.

AT an American "Independence" banquet at Geneva, considerable amusement was caused by the receipt of the following telegram from Chamounix: "The American flag is at this moment waving on the summit of Mont Blanc. If you don't believe it, come and see."

YOUNG FOLKS' COLUMN.

Yonny Krauss.



I haf von funny leedle poy,
Vot gomes schust to mine knee;
Der queerst schap, der createst rogue
As efer you dit see;
He runs, und schumps, und schmashes dings
In all barts off der house—
But vot off dot? he vas mine son,
Mine leedle yonny Krauss.



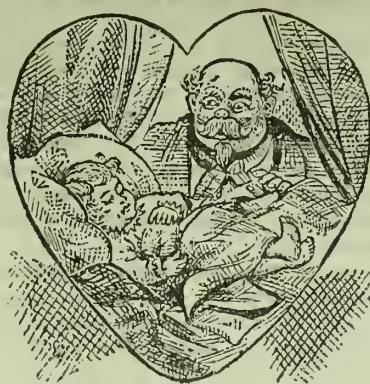
He get der measles und der mumbs,
Und eferding dot's oudt;
He shills mine glass of lager beer,
Poots schnuff indo mine kraut;
He fills mine pipe mit Limburg cheese;
Dot vas der roughest chouse;
I'd dake dot vom no oder poy
But leedle Yonny Krauss.



He dakes der milk bau for a dhrum,
Und cuts mine cane in dwo
To make der schticks to beat it mit;
Mine cracious, dot vas drue!
I dinks mine hed vas schplit abart,
He kicks oup sooch a touse.
But nefer mind, der poy vas few
Like dot young Yonny Krauss.



He asks me questions sooch as dose:
Who baints mine nose so red?
Who vas it cuts dat schmooth blace oudt
Vrom der hair upon my hed?
Und where der plaze goes from der lamp,
Vene'er der glim I douse;
How can I all dose ding eggblain
To dot schmalt Yonny Krauss?



I somedimes diink I schall go vild
Mit sooch a grazzy poy,
Und vish vonce more I could haf rest
Und beaceful dimes ensboy;
But ven he vas ashleep in ped,
So quiet as a mouse,
I prays der Lord, "dake anydings,
But leaf dot Yonny Krauss."

GOOD HEALTH.

The Office of Perspiration.

A writer on hygiene for the *Prairie Farmer* makes the following allusions: The amount of perspiration that exudes from the surface of the skin is greatly varied by circumstances. As for example, it is large when the body is surrounded by hot, dry air, even to the extent of five pounds in 24 hours, while in a cold and moist one the amount in the same time may be but one pound. The results of these conditions are often strongly felt by man and beast. We should naturally suppose that if we lose five pounds of water in 24 hours, we should need that large amount of water to supply the place of that which has passed away. And to some extent this is no doubt true. It may have been observed by all who labor that they feel the want of a large amount of drink. The sensation of thirst does not arise from dryness of the mouth or throat alone, but in part from dryness or need of moisture felt by all the tissues. They all employ the throat and mouth to make known their wants. Another fact is not to be forgotten, that the kidneys have duties so similar to those of the skin, that they aid each other. On a cold, moist day the skin is disabled and cannot execute its usual amount of secretion. Moisture checks evaporation from the surface, and cold lessens the caliber of its pores. In this disability of the skin, the kidneys lend a helping hand in relieving the system of its impurities. And so, if the air be hot and dry, the skin is well able to do extra duty and grant the kidneys a recess from their usual toil.

Another fact is worth a passing notice, namely, that the dryness of the skin retains the heat generated within the system and so creates a fever. Relieve the skin, help it to do duty by warm baths or in some other way and the fever disappears. No moisture came upon the surface and so no evaporation and no cooling of the system could occur. On this fact is based the habit of washing the surface two or more times a day, because this process induces evaporation, cools the skin, opens the pores and lets off the heat retained.

In health, perspiration is graduated by the temperature of the air and amount of exercise. On reducing our temperature in hot seasons of the year, not only our health and comfort but our life depends. The ordinary heat of the human body is 98° Fahr. If the air surrounding us is higher, we suffer more or less. Heat disease begins to manifest its power, and the great remedy is the free application of cold water to reduce the temperature of the body and induce free perspiration. Thus it seems perspiration contributes largely to our health and comfort. But to reap its greatest good, we should daily wash the surface and so prevent the absorption of what is waste and poison. Excessive bathing, as practiced by some boys, may be harmful. All that health and comfort can require is simply washing away the excretion deposited on the skin.

KILLING FUNGUS IN CELLARS.—A correspondent recently asked the *Journal of Chemistry* for a simple and effectual remedy for fungus and mould in cellars. A German agricultural journal gives the following: Put some roll brimstone into a pan and set fire to it; close the doors, making the cellar as nearly air-tight as possible for two or three hours, when the fungi will be destroyed and the mould dried up. Repeat this simple and inexpensive operation every two or three months, and you will have your cellar free from all parasitical growth.

CLEANING THE TEETH.—A writer says; A good way to clean teeth is to dip the brush in water, rub it over genuine white Castile soap, then dip it in prepared chalk. I have been complimented upon the whiteness of my teeth, which were originally anything but white. I have used the soap constantly for two or three years, and the chalk for the last year. There is no danger of scratching the teeth as the chalk is prepared; but with a good, stiff brush and the soap it is as effectual as soap and sand on a floor.

DOMESTIC ECONOMY.

Preserving Figs.

An agricultural writer in one of the Southern States gives the following methods of preserving figs:

Crystallized Figs.—Gather the fruit when fully ripe, but not cracked open. Place it in a perforated tin bucket or wire basket, dip it for a few seconds into a deep kettle of hot and moderately strong lye. After allowing the lye to drip from the figs, boil in syrup made with fourteen pounds of white sugar to one gallon of water, five to ten minutes. Let the syrup drip from the fruit and then sprinkle powdered sugar thickly over the figs and dry gradually in your drier or oven, turning the fruit frequently, and sprinkling fresh sugar over them each time. They make a delicious dessert dish or confection.

To preserve figs in syrup.—Prepare them by dipping in lye as above directed. Then cook in rich, clear syrup, about the same length of time as for drying; take out and place in porcelain jars, filling up said jars and covering the fruit with the same or a similar syrup to that in which they have been boiled. This syrup may be flavored with ginger, mace, or pineapple, the latter being a very delicate and popular flavor.

Pickling Figs.—Gather the figs when fully swollen but not quite ripe, leaving the stem on. Soak them 10 or 12 hours in moderately strong brine (salt and water.) Take them out of this brine, rinse with clear water, and place in glass or stone jars. Have a kettle of pure, strong, genuine "cider vinegar" or "white wine vinegar;" and add a pound of fair brown sugar to each gallon of this vinegar, with such spices as you choose for flavoring. Place this kettle of vinegar over the fire, stirring and dissolving the sugar, and when the vinegar comes to a simmer, pour it over the figs, covering them about an inch. Place a small piece of horseradish root in the top of the jar, cover close, set away in a cool place, and they will keep a year or two, if not eaten sooner! (This pickle is very superior, and highly popular wherever known.)

Fig Cakes.—Cakes of figs, such as are mentioned in the Bible, may be made by first scalding the fruit in hot lye, as heretofore directed, then dripping the lye off, and slowly stewing the figs to a smooth pulp, in a porcelain kettle, adding a little sugar and flavoring matter, and stirring the mass carefully while cooking. When thoroughly done and reduced to a smooth mass or pulp, free from lumps, pour into shallow pans or fancy shaped molds and dry slowly in a kiln or drying house. When dry and cool, wrap each cake in white paper, and store away in a cool and dry place. These cakes may be broken up and stewed over again, at pleasure, or eaten from the hand, like dried figs or dates.

How to Make Fine Bolognas.

From Germany, the classic land of sausages, the *London Farmer* get a receipt for the preparation of the far-famed "salami," which may be welcome to those of our country readers who prefer to manufacture such dainties for themselves. Lean beef freed from gristle is to be chopped up very fine and mixed with a third or one-half its weight of lean pork similarly treated. To this mixture is added an equal bulk of fat bacon, cut in strips as thin as the back of a knife, and then chopped into pieces about the size of a pea. For every 12 pounds of this mass are required half a pound of salt, a drachm of saltpetre, half a pound of powdered sugar, and a tablespoonful of whole white pepper. The block on which the meat is to be chopped should be previously rubbed over with garlic, but none of this must be mixed with the sausage mass. Extreme epicures may add to the delicacy of flavor by mixing with the sausage meat some powdered cake obtained by rubbing walnuts or hazel nuts through a grater, making a paste of them with water and fat, and then allowing it to dry before use. In filling the sausages the meat must be well crammed home with suitable appliances, as pressure with the hand alone is quite insufficient to prevent inclusion of air, which is sure to spoil the result. After hanging for two or three weeks to dry, the red color of the meat and the white bits of fat will be visible through the skin of the sausages, and then it is time to smoke them. By careful attention to these directions, sausages thus prepared will keep well for at least a year and a half, and the delicacy of their flavor increases as they get older. The great secret of their keeping properties is to put in plenty of bacon.

RICE PUDDING.—One cup of fresh whole rice, nine cupfuls of new milk and one cup of sugar. Put into a stone or earthen pan, and bake in a moderate oven three hours. Stir it two or three times during the first hour; do not increase the heat of the oven after the milk begins to simmer; be careful not to scorch or blister; a light cover toward the last will be better. Set to cool undisturbed. It is best eaten cold. Raisins may be added, if desired.

COOKIES FOR FORTY OR FIFTY.—Four cups of sugar; one cup of butter; two cups of sour milk; two tea-spoonfuls of cream-yeast, brown or white; flour sufficient to roll them out. Work them but little; make them thin, and bake in a quick oven.



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SAN FRANCISCO:

Saturday, September 14, 1878.

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The Week.

While the music in the Mechanics' Institute pavilion is still at its height, the refrain is caught up by the interior societies and the fairs are now the uppermost topic in all agricultural circles. Last week the Napa and Solano Society did what we understand it has not done before, that is, to have receipts more than balance expenditures. This is a good starting point for the season. It shows popular interest, and we hope the whole list of this year's meetings may register a like result. As we write, the Golden Gate District fair in Oakland is being held. In some departments it has already shown itself an eminent success. In live stock, for example, we doubt much whether any exhibition this year will excel it, but we shall see. Next week the State Society will open its grand reception at Sacramento. Unusual preparations have been made for entertainment. Besides the show of agricultural productions, animal and vegetable, and the agricultural "hoss trot," there will be this year agricultural military parades, agricultural rifle and pigeon shooting, agricultural base ball matches, agricultural fire engine and brass band contests—in fact, all the departments of a highly diversified agriculture will be duly represented. Thus will the coming weeks be filled until November approaches.

Where in the World are We?

Thus cried an old Roman orator at the close of an impassioned paragraph in which he had reviewed the events of the passing days until he seemed to lose himself in contemplation of their startling character. We have not in mind to give the words any such intense figurative significance, but rather to apply them geographically or in the literal sense of the expression.

It is said that a man's backyard is a true exponent of his character; that the expression of his back door is of deeper significance than his polished door plate in front; that the shine on the heel of a boot means more than the shine on the toe. The obvious conclusion from these popular expressions is, that if a man is careful to secure perfection at those points which are apt to be overlooked, he will be sure to be complete in those which are prominent. Such being the case, it occurs to us that Uncle Sam must be accorded a high position. Geographically speaking, the Pacific coast is his backyard and the Golden Gate is his back door. As the nations view his premises and note the perfection with which his rear regions are developing, and the results of the investment of capital and labor which is made in them, a question might arise as to whether the old gentleman intended to have his lot front on Atlantic or Pacific avenues, or whether he intended to indulge himself in door plates and hitching posts on both thoroughfares. The latter course seems called for by the logic of events. The spirits of enlightenment and of commerce are achieving victories all around the circle of the Pacific. The populous shores of eastern and southern Asia are learning each year the advantage of looking to the west coast of America for the supplies they need, rather than depending upon the ports of Europe. The islands of the South Seas are speeding from squalor and nakedness toward the higher life of civilization. Beyond these, the oceans on the course to Europe from this coast are yearly plowed by more keels, and traffic instead of being confined to the leading cereal, is calling for assorted cargoes of our varied productions and manufactures. Such being the case, Uncle Sam finds a busy street, so to speak, running along his back fence, where but a few years ago there was thought to be nothing but a stopping place for gossiping whalers and boundless field for intrepid explorers. If the dwellers in California 30 years ago had asked "Where in the world are we?" the answer would have been "Out of it." As we ask to-day "Where in the world are we?" we reply, "Well, nigh in the center of it."

These remarks are rather trite, it is true. They are the stock in trade of occasion-orators and the backbone of commercial reviews of the past. And yet as the minds of the world are growing morbid over dullness, depression and retrogression, it is always timely to launch a cargo of cheer and progress upon the sea of gloomy thoughts. Thus we thought as we saw that on a single day of last week six ships carrying California grain passed outward through the Golden Gate, laden with more than 200,000 centals. One of the ships, besides her quota of wheat, took over 31,000 cases of canned salmon, 240 cases of canned fruit and 260 cases of canned beef, thus paying an installment on the vast loans of preserved provisions which we have had from the outside world for the last 30 years. Thus in a single day we set afloat more than half a million dollars' worth of surplus products, and laid a trap for that much British gold. This instance of a single day leads us to scan the list of a week's exports of our products to see whence the lines of trade are binding us. It was a wide circle of connections which the records showed. Beginning with a point just north of our coast, we followed the circle round. There was a good amount of barley, corn, flour, fruit and provisions for British Columbia; flour, fruit, lumber, wine and domestic manufactures to a port in the frozen north; lumber, furniture, vegetables, wines, provisions, bricks and domestic manufactures to the Sandwich Islands; flour, fruit, fish, hops, provisions, vegetables and wine to Japan; fish, flour, fruit, honey, hops, oats, provisions, vegetables and wine to China; lumber, flour, canned fruit, provisions and vegetables to the Society Islands; lumber, by the cargo, salmon, barley, canned and dried fruit, hops, honey, vegetables and domestic manufactures to Australia; barley, bone meal, canned and dried fruits, fish

and vegetables to New Zealand; barley by the tons, canned fruit, wheat by the cargo, flour, lumber and fish to Peru. These are but a few notes of a week. Another week would doubtless bring into the list as many more ports, and thus the nearer trade goes on, while the longer range shooting of barley to New York, wheat and barley to the ports of England and France continues.

In these notes of trade progress from our main port lies one hope of our producers. Although the greater profit and prosperity would perhaps ensue from the filling of our own State to its full and almost limitless capacity with resident consumers and producers, this is but a hope to be slowly realized. The immediate future of producers lies in the extension of the export trade, and it is gratifying to every one who owns a productive acre, to be assured that the foreign demand for our productions is increasing with vigorous and healthful growth.

IMPROVING THE CEREALS.—We notice that an Englishman has appealed to the Royal Agricultural Society, to do something toward increasing the yield of grain crops, by offering prizes for the greatest yield of any variety of wheat which has been recognized as a variety by three years growing. He would offer a prize for the best new variety of wheat, whether produced by ennoblement (repeated sowing of best ears), by hybridizing or by sport. Thus he would expect to find out new varieties of seed, which would yield from two to four bushels per acre more than the kinds now sown. Indeed he would thus so far increase the home production of wheat that the twenty millions which England now pays outsiders for wheat might rather be paid to home producers. We cannot say that this would be a result that we would "devotedly hope for," nor do we anticipate it. Much can be gained by proper effort for improvement of wheat, we doubt not. In fact much has already been done by a few growers. But a nation of "improvers" is not born in a day, and we do not think it will be wise to decrease our acreage next year in expectation that England will supply herself.

THE PHYLLONERA IN MALAGA.—Although we set ourselves up for sharp rivals of famous Malaga in the production of raisins, no generous mind can restrain a thought of sympathy with the Spanish vintners at the announcement that their vineyards are seriously threatened by phylloxera. If, however, the evil should cripple them, it is only a trade question which suggests redoubled care in the development of our raisin resources, to supply the lack which reduced Spanish production would occasion. We read in the *London Farmer* that a mysterious disease recently broke out among the vines in the commune of Palo, about 18 kilometres from Malaga, and the Scientific Society of the town being unable to determine its nature, sent up some specimens of the affected plants to the Ministry of Agriculture at Madrid. Here they were carefully examined by Dr. Paz de Graells, an acknowledged authority in such matters, and the result of his investigation established the presence of legions of the dreaded plague on the roots of the vines in question. The discovery has created perfect consternation among the population, more especially in the Malaga and Xeres districts, and the wildest propositions are rife as to the proper means of preventing an extension of the mischief, which appears to be directly traceable to the introduction of some smuggled vine from France into Spain by way of Cadiz, as long ago as 1875.

SAMPLES OF FORAGE PLANTS.—Our Sacramento contributor makes the excellent suggestion that those who have experimented with new forage plants, bring samples of the growths with them to the State fair in order that all may see them, and valuable notes of the value of the different plants may be exchanged between the growers. We commend the suggestion to all who go to the fair. A bundle of forage may be easily carried; and in taking samples they should be complete, roots, stem, blade and flower, if there be all these parts visible at the time. By all means carry samples if you have been experimenting.

ON FILE.—"Notes on Grape Vines," C. C.; "Tramps," O.; "Forage Plants," G. R.; "Jackson's Well Borer," H. E. H.; "Over the Mountains," C. F. Y.; "Children's Rights," E. B.; "Household Chat," F. W.; "Hen Houses," S. H. H.

QUERIES AND REPLIES.

Affinity of Species in Grafting.

EDITORS PRESS:—Are there any kinds of fruit that can be grafted or budded into the cottonwood tree?—OLD SUBSCRIBER, Hanford, Tulare county.

No; certainly not with any valuable results. Many curious things can be done by grafting or budding, but the farther we advance in the practice of these arts, the more clearly it appears that there are certain laws which govern successful growth in engrafted buds or scions; that the unions of trees which were described hundreds of years ago in the old classic writers, are altogether unattainable in modern practice, and the old records are generally pronounced untrustworthy. If the old Latin writer, Martial, had been asked the above question, he would have answered that the cherry does well on the poplar, of which the cottonwood is a species. But such assertions are pronounced absurdities by the best modern authorities.

Our querist thus has his answer. But the subject is one of curious if not of much practical interest, and we will pursue it a little farther. In a valuable hand-book entitled "The Art of Grafting and Budding," just published by Macmillan & Co., of New York, we find some interesting statements concerning the affinities of species of plants as they affect the success of the grafter. The book is a translation from the French of Baltet, fully illustrated, and is the most complete work on the subject written in any language. It should be in the hands of every horticulturist. In treating of the affinities of species, M. Baltet remarks that the researches into this subject are not very complete, and that the only theory that has yet been drawn from them is that the kinds to be grafted must be of the same botanic family. For instance, he notes that the peach and the apricot are grafted on each other with difficulty, while both do well on the almond tree and plum tree. All the cherries unite with the Mahaleb, but the Mahaleb will not succeed as a graft on any of the cherries. The sweet chestnut prospers on the oak, but will not do so if grafted on the horse chestnut, which belongs to another family. The medlar and the quince, which have solitary flowers, flourish on the hawthorn whose flowers are in corymbs. He gives other instances of this kind and then hints at the queer combinations which can be made by remarking that those who have a taste for whimsicalities may gather from the same plum stock, apricots, peaches, nectarines, almonds, the corymbs of the Canadian cherry, and flower garlands of the Chinese and Japanese plums.

M. Baltet alludes to the startling advice of classic writers on the subject of grafting, and mentions the following as among the absurdities of the ancients: Virgil speaks of a plum tree which bore apples after having been grafted, and recommends the grafting of the pear on the ash. Calumella would have the olive grown on the fig. Palladius speaks of the walnut being grafted on the arbutus, the pear on the almond, and the citron on the mulberry. In more recent times, Madame de Genlis grafted the rose on the holly, or the black currant, in order to obtain green or black roses. Others united, in their imaginations, the orange to the holly, so as to grow oranges in northern forests, and the vine to the walnut so as to have the grapes full of oil. These are all so many hallucinations.

Many excellent results have been gained by grafting, but it is always well to have an eye to the practicability of a thing before it is too loudly proclaimed. The *Journal de la Vigne et de l'Agriculture* lately came forward with a glorious suggestion for the prompt and complete extirpation of the phylloxera plague in France. It asserts that olive and mulberry trees planted in vineyards that have been devastated by the phylloxera are never attacked, and advocates a return to the system often practised by the Italians for many centuries past, of grafting the vines upon these stocks, as a certain means of getting rid of the pest. In commenting on the feasibility of this extremely plausible scheme, M. Barral takes occasion to point out two slight drawbacks to its efficacy which appear to have escaped the attention of its sanguine proposer. The first of these is that olive and mulberry trees do not resist the attacks of the phylloxera, and the second, that nowadays at least the vine cannot be grafted on them, whatever may have been the case in centuries gone by.

A Peep at an Orange Grove.

The cut on this page gives a peep at an orange grove—a very indefinite one, it is true, such perhaps as a man might get by riding by on an express train. It does not give any idea of the clean cut foliage of the tree nor a very definite idea of the arrangements made for irrigation, and yet if one looks closely he may see the ditch between the rows beginning at the right of the palms in the foreground, and stretching away between the rows of orange trees. There may also be seen a small ditch running to the roots of each tree, and a man with a hoe on his way to let water from the central ditch into the laterals.

There are many ways of applying water in the irrigation of orchards in the southern part of the State. One way is like that shown in the engraving. Another is to bank up the earth in a circle around the tree, and at a little distance from the trunk, which gives the trees the appearance of standing in basins of earth. The problem of irrigating orange trees is one which has brought evil in its practical solution, because doing has often been overdoing. Whatever plan is adopted of bringing water to bear upon the trees, the secret of success seems to lie in doing it wisely, and not too well. Sub-earth irrigation by means of pipes has been found to be eminently successful in results, but it is expensive. The throwing of loose, dry earth over the wet area around the trees after irrigation, prevents evaporation, baking of the soil, etc., and is good in results where the labor can be afforded.

The engraving which we use this week, as we have said above, does no justice to the beauty of an orange tree, but it may show the arrangement of the trees and one way of locating the irrigation ditches. At some future time we may give an engraving which will embody the beauties of the groves more fully.

A NEW GRAPE.—We read in the *Country Gentleman* announcement of a new grape secured by that well known propagator of new varieties, J. H. Ricketts, of Newburgh, New York. This one is of especial interest in California, for it is produced from kinds which flourish here in the open air, but can only be grown at the East under glass. The new grape is a seedling of Pope's Hamburg, fertilized with Cannon Hall Muscat. He calls it the Welcome. In the specimens sent the *Country Gentleman*, the bunches measure six inches long, and over five inches across the two shoulders, and they are moderately compact. The berries are slightly oval, seven-eighths of an inch long and three-fourths wide, and are quite black, with a blue bloom. The flavor is unusually rich and sweet, for which it is rarely equalled, and it will be highly valued for this quality by some, while others have preferred the milder quality of such varieties as the Black Hamburgh or Muscat of Alexandria. On tasting the three, side by side, the Welcome is found to be much higher in flavor.

BUHACH FOR LICE ON CATTLE.—A correspondent writes to the PRESS, after a visit to the ranch of W. L. Overhiser, of San Joaquin county, describing the success which Mr. Overhiser has attained in using Buhach, or California insect powder upon cattle for killing lice. He applies it with an insufflator to the affected parts of the animal, rubs it with the hand and does not find a live louse after a thorough application. He has used it with perfect success in ridding a dog of fleas. We doubt not this powder will be widely used to rid domestic and farm animals of parasites, because the remedy is so cleanly and easily applied.

INTERESTING SPECIMENS.—In the package containing his charming contributions to this week's PRESS, Prof. J. G. Lemmon encloses a few little plants, neatly pressed and labeled, which were gathered on the high peaks which he describes in his Yosemite letter, and a specimen of the new plant *Hollisteria lanata*. All the specimens have a real interest to us, and the new one fully merits his enthusiastic announcement of its discovery.

BERMUDA GRASS.—The discussion of the virtues and vices of this plant is drawing out the commercial interests. Messrs. R. J. Trumbull & Co. advertise in another column that they are prepared to furnish the sets to those who wish to test the grass.

Agricultural Productions at the Mechanics' Fair.

We enjoyed an hour the other day in examining the California productions contributed by the growers to the exhibit collected by the *Journal of Commerce* for display at the Mechanics' fair. We recognized among the contributors many readers of the RURAL PRESS, and we doubt not all will be interested in a few notes of the way in which their material strikes observers. We shall not have space to enumerate all the exhibitors, for that would transform our columns into a catalogue. We must select those articles which come directly from the producers, and those whose interests lie in the country.

The largest individual contributor is Gen. John Bidwell of Chico, and his display is too extensive to name by articles. Leading specialties are nuts, grain in sack and sheaf, flour, vegetables and fruit, both fresh and dried, the latter showing the good work of the new drier

alone. There are also beautiful boxes of Blowers' best raisins and clusters of the grapes from which they are made. Another splendid show of dried fruit and raisins is made by Mr. George A. Dietz, of Sacramento, who is bringing out fine testimonials for the success of his drier in each sample of fruit he shows. Mr. John Britton, of San Jose, shows well what can be done in the line of profitable production of dried fruit by his fine dried pears. Rich samples of canned fruit in jars are shown by the two thriving companies at San Jose, the "San Jose Fruit Packing Company," and the "Golden Gate Packing Company." For the market which these companies are making for the surplus fruit of the Santa Clara and Alameda valleys, and for the way they are pushing trade abroad, they are entitled to the good opinion of all producers. May their example be followed all over the State.

One of the most attractive features of the display is that made by the California-grown bananas by Mr. J. M. Asher, of San Diego.



A GLIMPSE AT AN ORANGE GROVE.

which has been erected on Chico ranch. Gen. Bidwell does not do things by halves when he makes a show of the productions of the State, a fact which is attested by a telegram which came this week from Paris, announcing the award of a medal to him for his exhibit at the great Exposition.

In the line of dried and canned fruits, the display is very creditable to all contributors. The boxes of fruit from Mr. Blowers, of Woodland,

RURAL readers are aware of Mr. Asher's enterprising efforts through the mention which we have frequently made of them. The bananas shown at the fair are of the dwarf Cavendish variety, the bulbs of which Mr. Asher imported from Florida, and which he pronounces by far better than any of the many kinds which he has grown. These bulbs were planted out two years ago last month. He now has, in his town nursery, in San Diego, over 50 full-bearing banana plants, and the others are rapidly coming into fruit. In all he has nearly 500 plants in good growth, and is furnishing bulbs to those who wish to test their growth. The fruit is rather small in size and not ripe enough to enable us to pronounce personally of its flavor, but the San Diego Union has "no hesitation in pronouncing these bananas, in richness of flavor, and otherwise, the very finest we have ever eaten." We are glad to know that banana-growing, through the efforts of Mr. Messenger, of Orange, Los Angeles county, Mr. Asher, of San Diego, and perhaps others, whose names we do not at this moment recall, has secured a firm footing in this State.

Prominent among the exhibitors of fresh fruits are C. M. Silva & Son, of Newcastle, Placer county, whom we mentioned last week. Their plates of mountain-grown peaches of several varieties, plums and prunes, show the fine stock of fruit trees which they are propagating. They are entitled to especial credit because they have taken pains to keep the display good throughout the fair by sending fresh boxes each week.

Other fruit has been received and placed before an admiring public from quite a list of growers. J. Routier, the well-known orchardist of Routier's Station, Sacramento county, sent plums and peaches through M. T. Brewer & Co. W. H. Jessup, of Haywards, whose plums we lately described, shows what can be done by intelligent and untiring orcharding. The opportunity for fruit growing on the tules is vouched for by the specimens from A. T. Bigelow, of Sherman Island, and the famous fruit region near the Sacramento is represented by mammoth Hungarian prunes from J. R.

Olsen. Other creditable contributions in fresh fruits are made by Hungarian prunes from J. W. Briggs, of San Jose, and fine mountain peaches from E. DeLory, Coloma, El Dorado county. Grapes are well shown in the collections of Mr. Blowers, of Woodland; Mr. Allen, of Allendale, Solano county; L. W. Buck, of Vacaville; and Dr. Strentzel, of the Alhambra vineyard, Contra Costa county, came in on Tuesday with his Centennial bouquet of assorted grapes in the style that fixed the world's gaze at Philadelphia two years ago.

In the line of field products, aside from those we have credited to General Bidwell, may be found the famous African muskmelons from the Sacramento river, shown by P. M. Walley and T. McNailey. Watermelons of fine size and quality were shown by Wm. McIntire, of Lodi, San Joaquin county. The giant of corn stalks is received from L. Robinson, of Santa Ana, Los Angeles county, said to be 18 feet high and planted June 1st.

The show of cereals in sack, jar and in the ear is characteristic. Wm. Van Wart, of Chico, Butte county, has a beautiful collection, which we believe is to be forwarded to some English Exhibition. They will make a sensation. Other exhibitors of cereals are John Gwiun, of Anaheim, who shows the Odessa wheat which withstood the rust this year, and Adam J. Steiner, of Woodland; and Mr. B. F. Wellington's display of field and garden seeds rounds out this part of the exhibit beautifully.

Wine is shown by J. B. Bradford, Courtland, Sacramento county; George F. Hooper, Sonoma, and by some of the city makers. Hops are received from Storey Bros., of St. Helena, in full growth, and speak well for their picking this year. Outside this display, Mr. A. Clock, of St. Helena, has a hop stand of his own, which shows his fine style of small packages for family use. The dairy industry is represented by a couple of Steele Bros.' fine cheese. An attractive and instructive display is that made by Dr. W. W. Light, of Sacramento, who has a hive of bees in full working under glass. There is also an exhibit of growing tobacco from Whipple's ranch.

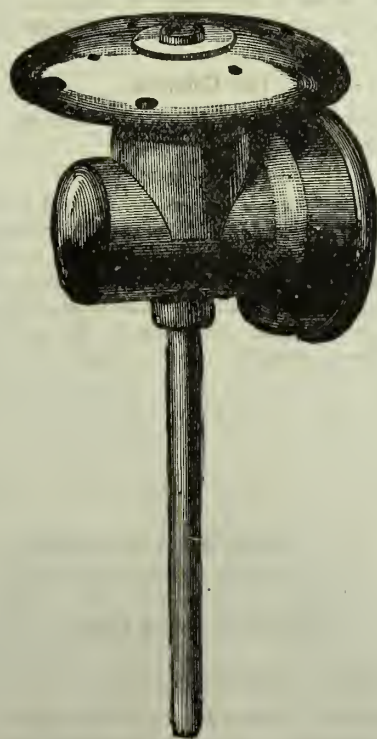
The Improved Revolving Lawn Sprinkler.

We illustrate herewith the "Perfection Revolving Lawn and Garden Sprinkler and Fountain," lately patented and just introduced on this coast by Dunham, Carrigan & Co., of this city. This little device is the most convenient of the lawn sprinklers yet brought before the public. The engraving shows the full size for a three-fourth garden hose, which is the size in common use. The hose is screwed into the socket on the side of the sprinkler (no nozzle being used) and the pin is pushed into the sod. The water is then turned on from the faucet, and the top of the sprinkler begins to revolve, one of the holes in the top being bored at an angle so that this motion is imparted. The water running from the other holes is spread in drops in a circle, the diameter of which is 25 feet. If a smaller space only is to be watered, the width of the watered circle is reduced by lessening the flow of water at the faucet. The writer has tried one of these sprinklers and found it the best of any similar device he has used. The sprinklers are made of pewter, but the journals are of brass so that they are durable and strong. Being sold for \$1.25, and doing as much as any sprinkler made, they are being very rapidly introduced for use in gardens and lawns. Being low on the ground they have the appearance of a miniature fountain when at work.

FORAGE PLANTS.—One of the interesting features of the forthcoming report of the Secretary of the California State Agricultural Society, will be a paper on forage plants by C. H. Dwinelle, of Berkeley. The plants especially discussed are the rye or ray grasses, meadow soft grass, and the carob tree, other plants being mentioned incidentally. The paper is well written, and contains many points of local experience and observation. We hope it will be widely distributed and read.

Volunteer Eucalyptus.

EDITORS PRESS:—You recently spoke of volunteer eucalyptus seedlings being noticed by General Stratton. The eucalyptus in New Zealand is almost a nuisance to some people in their gardens because of the seedlings. Wherever the seed drops you may look for a tree, the steady periodical showers or rains germinating the seed very rapidly. Having been in New Zealand, I have seen this for myself.—THOS. P. HINDE, Anaheim.



The "Perfection" Lawn Sprinkler.

retaining a color which almost equals Nature, because of treatment by the Mefford process, and dried in Mr. Blowers' drying house, are as attractive as any we ever saw on exhibition anywhere. The tasteful arrangement of the fruit is a gift to the public by Mrs. Blowers, and she should have a diploma for the style

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Pocket Map of California and Nevada.

Compiled from the latest authentic sources, by Chas. Drayton Gibbs, C. E. This map comprises information obtained from the U. S. Coast and Land, Whitney's State Geological, and Railroad Surveys; and from the results of explorations made by R. S. Williamson, U. S. A., Henry Degroot, C. D. Gibbs and others. The scale is 18 miles to 1 inch. It gives the Judicial and U. S. Land Districts. It distinguishes the Townships and their subdivisions; the County Seats; The Military Posts; the Railroads built and proposed, and the limits of some of them; the occurrence of gold, silver, copper, quicksilver, tin, coal and oil. It has a section showing the heights of the principal mountains. The boundaries are clear and unmistakable, and the print good. 1878. Sold by DEWEY & CO. Price, postpaid, \$2; to subscribers of this journal, until further notice, \$1.

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FAVORABLE LOCATION,

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Sure Crops Every Year.**The Reading Ranch,**

In the Upper Sacramento Valley, originally embracing over 26,000 acres of

Choice Grain, Orchard and Pasture Land,

Is now offered for sale at low prices and on favorable terms of payment,

In Sub-Divisions to Suit Purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends some 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drouth.

The climate is very healthful and comparatively desirable. The near proximity of high mountain peaks gives cool nights during the "heated terms" which occur in our California summers.

Soft well water—remarkably sweet, pure and healthy—is obtainable at a depth of from 15 to 35 feet.

Wood is plentiful and easy to get.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract. Also, Vegetables, Corn and all other cereals ordinarily grown in the State.

A considerable amount of the rich bottom land has already been cultivated.

Deep Soil With Lasting Qualities.

The soil throughout the tilled portions of the Ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading—all of which are located within the limits of the ranch.

For Colonies.

Land suitable for settlers in colonies can be obtained on good terms.

Town Lots

Are offered for sale in Reading, situated on the Sacramento River, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor,

EDWARD FRISBIE,
Anderson, Shasta Co., Cal.**ANNUAL MEETING.**

The annual meeting of the stockholders of the Grangers' Bank of California for the election of Directors, will be held at the office of the Bank on

Tuesday, the 8th day of October, 1878,

At one o'clock P. M. ALBERT MONTPELLIER,
Cashier and Manager,
San Francisco, Sept. 3rd, 1878. 42 California Street.

PACIFIC RURAL PRESS,

A first-class 16-page Illustrated Agricultural Weekly, filled with fresh, valuable and interesting reading. Every farmer and ruralist should take it. It is immensely popular. Send for a sample copy.

DEWEY & CO., Publishers, S. F.

Lands for Sale and to Let.**A NEW COLONY.**

100 Homes For Sale on More Reasonable Terms than ever before offered in Southern California.

Eighteen thousand acres of land in Monterey County, including the Pleito ranch, belonging to Pinkerton and Jackson, are now offered for sale in farm or homestead tracts to actual settlers. The lands embrace the finest wheat producing section in California.

Fruit, vegetables and all manner of small grain come to rare perfection in this region. For stock, hogs, bees and general farming, these lands are not excelled. Water and timber are abundant, the San Antonio river running for 12 miles immediately through the lands. Good postal facilities are already established, there being an office at the Pleito ranch, and the coast line of stages passing daily through the entire property.

The lands will be sold on the ground, and all parties desiring cheap, yet valuable farms, should not miss this opportunity of securing them. Those who first come will have choice of location.

An elaborate prospectus detailing terms and conditions of sale is now published and will be mailed to all who apply, by mail or otherwise, to the undersigned at the Pleito post-office, the point where for convenience the business in connection with this new colony will be transacted.

This is no stock company. The deeds to lands will come direct from Pinkerton and Jackson, to whom all moneys will directly pass, and each purchaser is only liable for the lands contracted for. There is no joint responsibility.

Send immediately for the prospectus, directing all communications or applications to

W. W. BROUGHTON,
Pleito Post-office, Monterey Co., California.

TO LEASE**ON FAVORABLE TERMS,**

50,000 Acres of Irrigated Land in Kern County, with abundance of Water Free.

In tracts of 80 acres and upwards, with comfortable House, good Barn, and Well of excellent water.

CROPS ARE SURE.

An average of 30 bushels of wheat per acre, and other products in proportion, have been raised on this land.

INDUSTRIOUS FARMERS

With stock and implements will find every advantage in acquiring a home and a competence.

COLONIES WANTED.

For further particulars inquire of

McAFEE BROTHERS,
202 Sansome Street, San Francisco

Land for Sale in Napa County.

I am offering my lands in Foss Valley, ten miles north of Napa City, for sale, as follows—to wit:

One tract of 800 acres, including my homestead, 220 acres of which is choice valley land, the balance good grazing land, is well watered, has a large supply of wood, is well improved, has a comfortable dwelling of nine rooms, barn, granary, sheds, etc. Also, a good orchard and choice vegetable garden. Price, \$15.00 per acre.

Also, one tract of 1,020 acres, about 100 acres of which is valley, the balance good grazing hills, is well watered and has enough wood on it to pay for it. Price, \$5.00 per acre. Also, one tract of 300 acres, 40 acres tillable, a portion can be irrigated from springs, has a large amount of wood on it and 500 rods of stone fence. Is well suited to running a small dairy, and raising pigs and chickens, by which a good living can be made; price \$2,000. The climate is choice, being shut in from the chilly coast winds, but has just breeze enough to make it pleasant; title perfect. The above lands lay contiguous. I will sell the whole or either one of the above tracts on easy terms—a liberal portion can remain at 10 per cent. per annum. If desired, will sell with the land, 1,500 head of Spanish Merino sheep. Come and see me, as I am determined to sell. Address the undersigned at Napa City. WILLIAM CLARKE.

FARM FOR SALE.

\$4,000.—Two Hundred Acres of Land in Mendocino County.

Thirty miles from the county seat, and 20 miles from the Coast, one of the healthiest localities in the State, especially for consumptives. The place is fenced off in six different fields. Plenty of water and timber for all purposes. A good orchard. Vegetables of all kinds grow well. A good dwelling with six rooms, ceiling and painted inside, good frame barn, granary, storehouse, smokehouse, etc.

Also, Six Hundred acres of grazing land, well fenced, three miles from the above farm, plenty of water and timber for all purposes. Price, \$2,250.

For further particulars, address "B. T.," care of DEWEY & CO., PACIFIC RURAL PRESS office, San Francisco, Cal.

BEE RANCH FOR SALE.

One of the best ranges in the State. At present working 375 stands Italian Bees. Apply for particulars to

D. W. McLEOD,
Riverside**MONEY TO LOAN**

AT LOWEST RATES,

ON FIRST-CLASS COUNTRY REAL ESTATE AND OTHER APPROVED SECURITIES,

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PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

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WILLIAM NILES, Los Angeles, Cal. Importers and Breeders of Thoroughbred Poultry. Eggs for hatching.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

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W. & J. ROBINSON, Hanford, Tulare Co., Cal., Importers and Breeders of Thoroughbred Berkshire Swine and Pure Brown Leghorn Fowls. Scotch Colley (Shepherd) Pups for sale. Imported parentage on both sides.

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116 Acres Unlimited Range.

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Healthy Stock.

FANCY POULTRY. Largest Yards on the Coast.

Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.

Safe arrival of Fowls and Eggs Guaranteed.

Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents. Address

Send stamp for price list.

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EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

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All Kinds of Country Produce.

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Commission Merchants in Cal. Produce.

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SACRAMENTO, CAL.

Chance in the Nursery Business.

There is a good chance in Tehama County for a skilled man who will go to work and start a nursery. The location is one mile from Vina station, in Tehama County, in a good growing region of country; the land is first-class and water abundant. A man is wanted, with good references, who will start a first-class nursery in partnership with the owner of the land. Address,

S. C. DICUS,

Vina Station, Tehama County, Cal.

GRANGERS' BUSINESS ASSOCIATION.

Incorporated Feb. 10th, 1875. Capital Stock, \$1,000,000.

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A. D. LOGAN, (VICE PRESIDENT).
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JOHN LEWELLING, (TREASURER).
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SHIPPING AND COMMISSION HOUSE,

Grangers' Building, - - - 106 Davis Street, S. F.

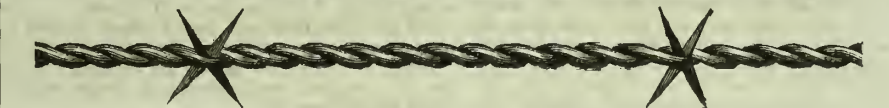
Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

TO OUR PATRONS AND THE PUBLIC.



Having obtained the control of the SCUTT PATENT MACHINERY on the Pacific Coast, we beg leave to inform you that we are manufacturing the

Scutt Patent Four-Pointed Steel Barbed Fence Wire,

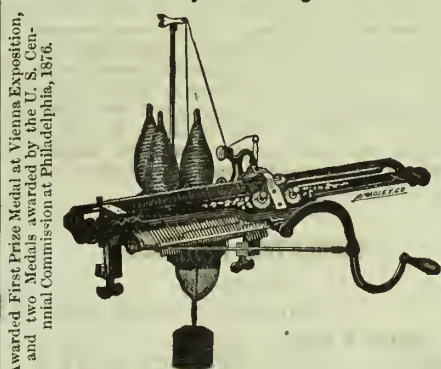
And we claim its superiority for the following reasons, viz: It is plaited, thereby preserving the grain of the metal. Our machines do not twist the single strand. We use steel made by the Seaman & Martin process for barbs. Our wire is made entirely by machinery, and is perfectly uniform. It is plaited by patent process, and is weather-proof. There are no knife points. It is four-pointed, having 128 points to the rod, double the number of any two-pointed wire. Our wire is wound upon strong spools, and can be shipped any distance.

To those needing fencing, and being obliged to transport it long distances by rail and wagon road, we would especially call attention to the difference in cost between barbed wire and lumber, as well as in cost of material. It takes 300 pounds single strand for one mile, and less than one-half as many posts as board fences. Please address orders to

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THE IMPROVED.

Lamb's Family Knitting Machine.



IT IS THE ONLY MACHINE That knits flat or tubular work of all sizes; Narrows and widens on hosiery or tubular work; Knits a regular right-angled heel, as by hand Narrows off the toe; Knits a sock or stocking complete; Knits mittens or gloves of any size without seam; Forms genuine Ribbed or Seamed work; Knits the Double Flat, or Fancy webs; Knits an elastic seamed-stitch Suspender with button-holes; Knits the Afghan stitch, Cardigan Jacket stitch, Fancy Ribbed stitch; the Raised Plaid stitch, the Nubia stitch, Shell stitch, Unique stitch, Tidy stitch, etc. It is now the standard machine for manufacturing, and the only family knitter that fills the bill. Local agents wanted. Send for circulars to

J. J. PFISTER & CO., General Agents,
Manufacturers of knitted goods and dealer in woolen yarns.
120 SUTTER STREET, Room 46, San Francisco.

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At Gray's No. 105 Kearny Street,

On receipt of the amount in postage stamps, any of the following pieces will be mailed, post-paid:

BABY MINE, (Song).....Smith, 35 cts
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Send for complete Catalogue of Music and Descriptive list of the



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Fine Jewelry Made to Order. Complicated Watches Repaired.

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CALIFORNIA STATE FAIR

FOR 1878,

SACRAMENTO, CALIFORNIA,

COMMENCING

Monday, September 16th,

And Closing September 21st, 1878.

50,000 CASH

TO BE DISTRIBUTED IN PREMIUMS

The exhibition will be divided into seven departments, and the

SOCIETY'S GOLD MEDAL

To be awarded to the most meritorious exhibition in each department.

Those desiring Premium Lists will please notify the Secretary.

THE LARGEST STOCK SHOW

—AND—

MOST ATTRACTIVE SPEED DISPLAY

Ever offered by any Agricultural Society in the United States.

Attractive Military Tournament.

PUBLIC SALE OF THOROUGHbred STOCK on Friday of the Fair.

The Central Pacific Railroad and steamers will carry articles to and from the Fair, FREE OF CHARGE.

Wells, Fargo & Co.'s Express will deliver all packages FREE, not weighing over twenty pounds.

Applications for stalls at the Park and space at the Pavilion should be made to ROBERT BECK, Secretary, at once.

MEMBERSHIP.....\$5.00
SINGLE ADMISSION.....50 Cents.

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MUSICAL RECORD.

A New Musical Weekly Paper,

The first number to appear September 7th.

It will be under the able editorial management of Mr. WM. H. CLARKE, and will be a true musical newspaper, its frequent appearance enabling it to give the latest news from all parts of the country and of the world, with reports of conventions, music schools, festivals, etc., and with bright, clear, and interesting articles on all subjects pertaining to musical progress.

Ditson & Co.'s Musical Record

Will be an impartial paper. The firm publish for all composers, and have no motive to favor one at the expense of another. All music teachers and musical amateurs are invited to support this, which is, in a special sense, their paper, and to send on all interesting items of information in their respective districts.

Subscription price, \$2 per year in advance. No free list. Premiums for lists of subscribers. More than 300 pages of music per year given.

Will exchange with papers having special musical departments.

Specimen copies sent free on application.

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BURNHAM'S
STANDARD WATER WHEEL
WARRANTED BEST & CHEAPEST.
Also, MILLING MACHINERY.
PRICES REDUCED APR. 20, '78.
Pamphlets free. OFFICE, YORK, PA.

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SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

E. W. WOOLSEY,
Berkeley, Alameda County, Cal.

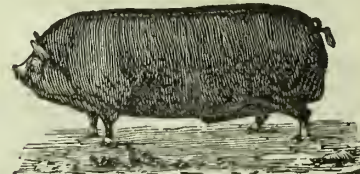
BERKSHIRES.



Breeder and Importer of the "Crown Prince," "Sambo," and "Bob Lee" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.

PETER SAXE, Russ House, San Francisco, and Los Angeles City, Cal.

BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A streets, Sacramento City, Cal.

BERKSHIRE and POLAND CHINA
PURE BLOODS.

The undersigned have a supply of young pure bloods of Berkshire and Poland China breeds of Pigs, and one Poland China Boar 19 months old, for sale. We will be ready to furnish to order at any time in the future. Pedigree furnished. We are making a specialty of these breeds for market.

GREVES & WHITE,
Riverside, San Bernardino Co., Cal.

Grangers' Bank of California,

42 California Street,

SAN FRANCISCO CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

OFFICERS:

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ALBERT MONTEPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

M. COOKE.

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PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit & Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOK & GREGORY.

Agents Wanted.

Able and reliable canvassing agents, who wish steady employment and good wages for good services, are invited to address this office and send references.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, September 11th, 1878.

The trade in Grain in the city seems to be slackening a little. The advices from England have shown a little weakness, and this gives our buyers a chance to rest a while before taking a fresh hold. So far as we can see there is no reason at all to expect a permanent nor any considerable decline.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday....	10s	2d@10s	5d	10s	5d@10s	8d		
Friday.....	10s	1d@10s	4d	10s	4d@10s	7d		
Saturday....	10s	1d@10s	4d	10s	4d@10s	7d		
Sunday.....	10s	1d@10s	4d	10s	4d@10s	7d		
Monday.....	10s	—@10s	3d	10s	4d@10s	6d		
Tuesday....	10s	—@10s	3d	10s	4d@10s	6d		
Wednesday..	10s	—@10s	3d	10s	4d@10s	6d		

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1876.....	9s	5d@9s	3d	9s	5d@10s	—		
1877.....	12s	6d@12s	8d	12s	9d@13s	2d		
1878.....	10s	—@10s	5d	10s	4d@10s	6d		

Freights and Charters.

The Call says: In the present unsettled condition of the Wheat market there is but little demand for tonnage. Rates entirely nominal at 40¢45s for wheat to Great Britain. There are now in port 58,336 tons shipping engaged for Wheat, 56,324 disengaged, and 11,490 tons loading general Merchandise. On the way to this port, so far as known, 157,000 tons.

The Foreign Review.

LONDON, September 10th.—The Mark Lane Express says: The weather has been less showery than during the previous week, but has not been satisfactory either for threshing or securing crops, as it has been dull and damp with a temperature rather high. Dry breezy days are now urgently needed, as there is still some Wheat to be carted, while a large proportion of Barley is still standing. Cases of sprouting are frequent, owing to the warm, moist atmosphere. Scotch and Irish reports complain of broken weather, which prevented securing of the crops.

The supplies of new Wheat have been fair, both at Mark Lane and the Provincial markets. Prices have favored sellers for all dry lots, but as only a very small proportion of samples on offer has been in anything like fine condition, most of the sales have been at irregular values. Sellers exhibited a good deal of firmness, and business to some extent was checked thereby. Increased attention has been paid to foreign Wheat during the past week or ten days, especially to old Russian and American, upon which the demand will doubtless be mainly directed so long as home produce is marketed in an unsuitable condition. An advance of sixpence to the shilling has been obtained on these descriptions.

The cereal year has commenced with prices of all produce at a healthy level, and though no marked advance can be anticipated in the immediate future, in view of large shipments from America and the tendency which her admitted large crop has to reduce values, still it may not be too much to say that the enormous requirements of this country may be pretty confidently relied on to absorb supplies at a range of prices little, if anything, below those now ruling in the London market. Another point to strengthen trade lies in the fact that even should imports of Wheat from American Atlantic ports increase, Russian supplies will necessarily cease as soon as her ports are closed by the winter. The business, consequently, rests upon a legitimate commercial basis, independent of fictitious support, either of a political or speculative character.

Eastern Grain Markets.

NEW YORK, September 7th.—Adverse cable reports and large receipts have caused a decline of 3¢5c on Wheat. New No. 2 Wheat has sold at \$1.08; old Wheat, \$1.10@1.13; new red and amber winter, 95¢@1.13; and red winter, \$1.08@1.20. Corn and Flour are also lower; Rye, 55¢@65¢. There has been a material decrease in the demand for grain tonnage for the Continent, and with continued light inquiry for the United Kingdom, and an ample supply of vessels, rates of freight have declined.

CHICAGO, September 7th.—As a rule, grains have not been very active during the week. To-day there was a quick drop, and at the lower prices the market closed weak and somewhat demoralized. Heavy receipts of the new crop of Wheat and undiminished amounts of Corn and other grains is telling severely on prices, and it is not impossible that rates will reign weak and easy throughout the fall. In fact, most of the dealers do not look for a rally until late in the winter. Sales of October Wheat, 86¢@89¢; Corn, 37¢@38¢. Oats were weak during the entire time, October selling at 21¢ to 21½¢. Rye sold for cash from 47¢ down to 45¢, and barley from \$1.10 to \$1.02, and af-

ter being by turns unsettled, higher and lower, closed at the inside notch. Provisions were affected by the falling off in the demand from the Southern States on account of the plague, by unfavorable foreign news, and by rumors of some heavy firms being long on the falling market. The result was that the market was flooded to sell at greatly depreciated rates, and this broke the market still further. Sales of October Pork, at \$8.32½@8.57½; of October Lard, \$6.65@7.15.

Eastern Wool Markets.

BOSTON, Sept. 7th.—In Wool business this week was a very fair average, and manufacturers were disposed to operate more freely at the low prices now current. There was also a considerable speculative inquiry for round lots on Michigan and Ohio fleeces, but speculators found few available lots offering. There is very little Wool on the market pressed for sale even at the decline of last week, dealers becoming indifferent about selling at present low prices. Wool has now touched about as low a point as at any time in the past three years, and holders prefer to take their chances later in the season rather than press sales at a price that does not pay costs. Sales include Ohio and Pennsylvania fleeces, medium XXX and above at 35¢@38¢; Michigan X and No. 1, 31¢@36¢; Wisconsin X and No. 1, 32¢@36¢; new Maine, 35¢; combed and delaine, 37¢@45¢; unwashed combed, 28¢@39¢; Texas, 16¢@23¢; Missouri, 27¢; Georgia, 28¢; Territory, 27¢@30¢; Eastern Oregon, 23¢@25¢; scoured, 35¢@75¢; tub, washed, 37¢@38¢; super and X pulled, 25¢@40¢; Spring California, 16¢@23¢.

NEW YORK, Sept. 7th.—The weak and unsettled feeling noticeable during the past several weeks in Wool has finally given way to a rather better condition of affairs, promoted not by an increased demand from manufacturers, or to an improvement in the goods market, but to the fact that sales were making daily at prices below those paid in the country during the season, and dealers therefore decided to use less force in their exertions to complete transactions and calmly await a change that will bring to them a profit on the capital invested. Though sales have been made in Boston of X and XX Ohio at 35¢, and Michigan at 32¢, here dealers are firm in their demands for 36¢@37½¢, and 33¢@34¢, respectively; and it is not probable that any can be obtained at a figure below. The feeling throughout the trade is that the bottom is reached, that the decline has been checked, and the belief is backed by the firmness now exhibited. California and Texas remain remarkably steady, but this is owing to the uses that are now made of this class of material, they being in many cases taken in place of fleeces. Woolen goods show little or no improvement, but an early change for the better is anticipated. The sales for the week include 30 bales Donskoi, at 21¢; 37,000 lbs Spring California, 20¢@25¢; 25,000 lbs new Fall do, 17½¢; 5,000 lbs scoured do, 53¢@55¢; 20,000 lbs Territory, 22½¢; 4,000 lbs Oregon, 25¢@28¢; 51,500 lbs Western and Eastern Texas, 13¢@24¢; 170,000 lbs X and XX Ohio, 36¢@38¢; 10,000 lbs No. 1 do, 39¢; 18,000 lbs combed, 45¢; 5,000 lbs unwashed do, 28¢; 20,000 lbs medium Delaine, 41¢@43¢; 5,000 lbs Western fleece, 35¢; 11,000 lbs medium unwashed do, 25¢.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Aug. 21.	WEEK. Aug. 28.	WEEK. Sept. 4.	WEEK. Sept. 11.
Flour, quarter sacks..	64,333	49,131	45,92	67,152
Wheat, centals.....	300,17	393,016	440,053	572,818
Barley, centals.....	62,295	44,631	61,355	48,962
Beans, sacks.....	350	437	1,832	1,149
Corn, centals.....	556	2,094	632	1,999
Oats, centals.....	7,121	3,462	5,739	2,352
Potatoes, sacks.....	12,838	8,859	10,741	10,683
Onions, sacks.....	877	991	1,207	1,011
Wool, bales.....	2,510	1,150	4,268	2,379
Hops, bales.....	—	45	191	435
Hay, bales.....	2,389	2,835	2,348	1,946

BAGS—Prices are unchanged since the rise noted last week.

BARLEY—Rates have shaded down a little, and the trade is dull and quiet this week. There are large exports going on both by ship and rail overland, and this movement is expected to continue for some time. We note sales: A lot of 740 bags Coast Feed sold at \$1; and a small lot of poor Chevalier at \$1.25; 500 sbs Coast Feed at \$1, silver; 240 at \$1; 350 at 92½¢ per cbl. Bright Bay Feed reaches \$1.05 per cbl, and there has been \$1.82½ offered for Chevalier.

BEANS—Receipts of new Beans continue, and prices take another step downward.

CORN—New Corn has come in, but the call for it is slight at present. We note sales of 79 sbs small round Yellow at \$1.37½; 50 do well dried at \$1.40.

DAIRY PRODUCE—The market for fresh roll shows a little weakness this week, and nothing but gilt-edged brands gain the outside prices. Much Butter is going from the firkin to the mold instead of from the churn to the mold, and this gives the market a large quantity of fresh roll. Cheese is unchanged.

EGGS—Eggs are a shade higher. Fresh California are now 42½¢.

FEED—Receipts of Hay are confined to low and medium qualities. Prices are generally without change. Corn Meal and Middlings are reduced \$2@1 per ton.

FRUIT—Our Fruit table below shows a general change of prices in nearly all Fruits.

FRESH MEAT—Fresh Meat will be found to have assumed new rates during the week, as may be seen by quotations elsewhere. The market is quiet owing to the hot weather.

HOPS—New Hops are coming in in good quantities and qualities, but the trade has not yet opened. Dealers are holding the new crop at 15¢ per lb, but we hear of no sales and the price is nominal. We may have sales by next week. Emmet Wells reports the New York market for the week ending August 30th, as follows: "Our crop reports at the present writing continue favorable for a yield of ½ to ¾ of last year's yield. The reports from England are for a full average yield, and of a good quality. From Germany the crop will be larger than was estimated earlier in the season. Although not growing quite as many as last year, they will have a surplus to spare for export."

LIVE STOCK—We hear of sales alive as follows: 900 bags at 4½¢@4¾¢ per lb on foot, silver; 220 fine cattle \$27.25 each; 1,700 good sheep \$2.37½; 1,300 fair lambs \$1.25 gold.

OATS—The best oats bear a shade higher quotation this week although the trade is small.

ONIONS—All good onions are reduced 12½¢ per cbl from last week's prices, the range now being 90¢@100 per cbl.

POTATOES—The trade is progressing evenly and to-day's sales are just within the range quoted last week.

PROVISIONS—There is no change in prices. VEGETABLES—Cantaloupes and Marrow fat Squash have sold better. Cauliflower is a little cheaper. Other vegetables are unchanged.

WHEAT—Shippers have contracted their views a little and transactions on this market have been reduced. We note sales: 900 cbls choice milling at \$1.72½, 30 tons good do at \$1.71½, 260 and 540 good shipping at \$1.70, and 640 do at \$1.67½ per cbl. Other sales have been within this range.

WOOL—Receipts of Fall Wool are increasing, but a satisfactory market has not yet been established. Receivers report it very dull to-day and but little doing. Quotations are nominal and it would be difficult to place large lots even at the figures we give as the present range, viz.: Southern and San Joaquin burry, 9¢@11¢; do free, 10¢@12½¢; Northern burry and seedy, 11¢@12¢; Northern free, 13¢@15¢. It will be noticed that the reports from the Eastern markets are unusually favorable and these may soon influence our local trade.

DOMESTIC PRODUCE.

[WHOLESALE.]

[WEDNESDAY M., September 11, 1878.]

BEANS & PEAS.		Brazil.....	14 @ 16
Bayo, cbl.....	3 25 @	Pecans.....	13 @ 14
Butter.....	— @	Peanuts.....	5 @ 6
Peas.....	— @	Filberts.....	15 @ 16
Red.....	2 37 @ 50	ONIONS.	
White.....	2 37 @ 50	Alvino.....	90 @ 100
Sm't white.....	— @	Union City, cbl.....	100 @
Lima.....	— @	San Leandro.....	90 @ 100
Field Peas.....	1 10 @	Stockton.....	90 @ 100
BROOM CORN.		Sacramento River.....	90 @ 100
Old.....	3 @ 7	Petaluma, cbl.....	100 @ 125
New.....	4 @ 7	Humboldt.....	— @
CHEESE.		Cutty Cove.....	1 25 @ 1 37½
California.....	4 @ 4½	Early Rose.....	1 05 @ 1 25
German.....	6 @ 7	Half Moon Bay.....	1 00 @ 1 25
DAIRY PRODUCE, ETC.		Kidney.....	— @
Butter.....	27 @ 32	Sweet.....	1 25 @ 1 37½
Cal. Fresh Roll, lb	27 @ 32	POTATOES.	
Fancy Brands.....	25 @ 27½	Petaluma, cbl.....	100 @ 125
Pickle Roll, new.....	25 @ 27½	Humboldt.....	— @
Pirklin, new.....	20 @ 25	Cutty Cove.....	1 25 @ 1 37½
Western.....	14 @ 16	Early Rose.....	1 05 @ 1 25
New York.....	— @	Half Moon Bay.....	1 00 @ 1 25
CHEESE.		Kidney.....	— @
Cheese, Cal., lb.....	8 @ 12½	do, Mallard.....	— @
Eastern.....	10 @ 12	Geese, pair.....	2 00 @ 2 50
N. Y. State.....	3 @ 3½	Wild Gray, doz.....	— @
Gilroy Factory.....	11 @ 13	White do.....	— @
EGGS.		Turkeys.....	20 @ 23
Cal. fresh, doz.....	37 @ 42½	do, Dressed.....	— @
Ducks.....	— @ 27½	do, Eng.....	3 00 @
Oregon.....	30 @ 32½	do, Common.....	1 00 @ 1 25
Eastern.....	18 @ 22	Rabbits.....	1 50 @
do by express.....	30 @	Hare.....	3 00 @ 4 50
Pickled here.....	27 @	Venison, lb.....	12 @ 15
FEED.		PROVISIONS.	
Barley, ton.....	15 00 @ 16 00	Cal. Bacon, lb, dry.....	11 @ 12
Corn Meal.....	40 00 @ 45 00	Medium.....	12 @ 13
Hay.....	7 00 @ 13 50	Light.....	13 @ 14
Middlings.....	20 00 @ 24 00	Lard.....	11 @ 13
Oil Cake Meal.....	34 00 @	Cal. Smoked Beef.....	10 @ 11
Straw, bale.....	25 @ 60	Eastern.....	— @
FLOUR.		Shoulders, Cover'd.....	7 @ 8½
Extra, bbl.....	5 12 @ 55	Hams, Cal.....	12 @ 13½
Superfine.....	4 25 @ 50	Dupees.....	16 @ 17
Graham, lb.....	3 @ 3½	None Such.....	15 @ 16
FRESH MEAT.		Ames.....	17 @ 17½
Beef, 1st quality, lb	5½ @ 6½	Whitaker.....	— @
Second.....	4 @ 5	SEEDS.	
Third.....	2 @ 3	Alfalfa.....	5 @ 12
Mutton.....	3½ @ 4	Canary.....	6 @ 8
Spring Lamb.....	5 @ 6	Clover, Red.....	15 @ 16
Pork, undressed.....	4 @ 4½	White.....	50 @ 55
Dressed.....	6 @ 7	Cotton.....	3 @ 10
Veal.....	5 @ 7	Flaxseed.....	6 @ 10
Milk Calves.....	8 @ 10	Hemp.....	6 @
do choice.....	9 @ 11	Italian Rye Grass.....	35 @
GRAIN, ETC.		Perennial.....	35 @
Barley, feed, cbl.....	93 @ 105	Millet.....	10 @ 12
Brewing.....	1 15 @ 1 25	Mustard, White.....	2½ @ 3
Chevalier.....	1 75 @ 1 90	Brown.....	1½ @ 2
Buckwheat.....	1 75 @	Rape.....	3 @ 4
Corn, White.....	1 25 @	Ky Blue Grass.....	20 @
Yellow.....	— @	do quality.....	18 @
Small Round.....	1 37 @ 1 40	Sweet V Grass.....	10 @
Oats.....	1 25 @ 1 35	Orchard.....	25 @ 30
Milling.....	1 50 @ 1 75	Good Top.....	18 @ 20
Rye.....	1 77 @ 1 80	Hungarian.....	8 @ 10
Wheat, Shipping.....	1 65 @ 1 70	Lawn.....	50 @
Milling.....	1 72 @	Mesquit.....	— @ 25
Off Grades.....	1 40 @ 1 60	Timothy.....	9 @
HIDES.		TALLOW.	
Hides, dry.....	16 @ 16½	Crude, lb.....	7 @ 7½
Wet salted.....	7 @ 9	Refined.....	9 @ 10
HONEY, ETC.		W. SPRING.	
Beeswax, lb.....	30 @ 31	S. Joaquin, 12mo free.....	17 @ 19
Honey in comb.....	11½ @	do 6 & 7 mo do.....	15 @ 18
do No 2.....	8 @ 9	Burly, 12mo.....	13 @ 16
Dark.....	8 @	do 6 mo.....	14 @ 16
Strained.....	5 @ 5½	do.....	12½ @
HOPS.		do.....	16 @ 19
Oregon.....	3 @ 5	do do burry.....	14 @ 16
California.....	4 @ 7	do, seedy & burry.....	18 @ 20
Wash. Ter.....	4 @ 6	Nevada.....	18 @ 22
NITS-Jobbing.		do.....	18 @ 22
Walnuts, Cal.....	8 @ 9	Oregon Valley.....	22 @ 24
do Chile.....	7 @ 8	do, Eastern.....	17 @ 20
Almonds, hd shlb	7 @		
Soft shlb.....	14 @ 16		

FRUITS AND VEGETABLES.

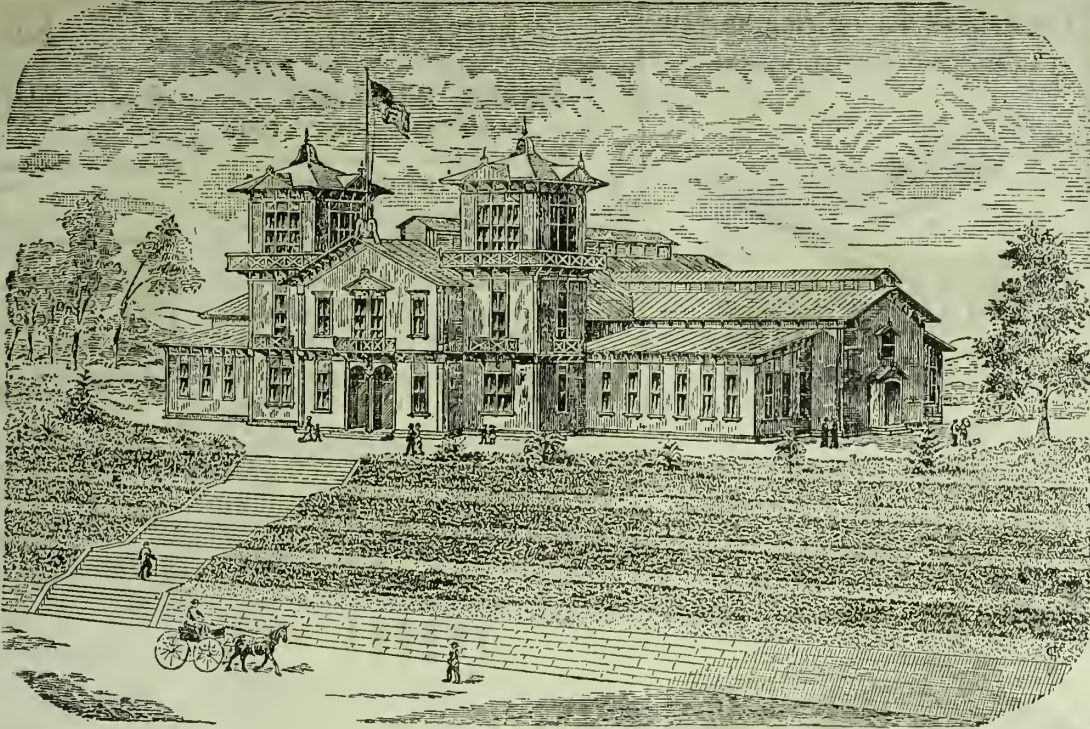
[WHOLESALE.]

WEDNESDAY M., September 11, 1878.

FRUIT MARKET.			
Apples, box.....	60 @ 1 00	White.....	6 @ 8
do Cooking.....	30 @ 40	Peaches.....	8 @ 9
Bananas, bunch.....	3 00 @ 4 00	do pared.....	18 @
Blackberries, ch'at 5	00 @ 6 00	Pears.....	6 @ 10
Cocanuta 100.....	5 00 @ 6 00	Pumpkins.....	3 @
Figs, lb.....	1 @ 3	Pitted.....	15 @
Grapes, com, bx.....	40 @ 60	Prunes.....	14 @ 10
Grapes, ch'ice, do.....	60 @ 75	Raisins, Cal, bx.....	1 00 @ 1 66
Limes, Mex.....	10 @ 12 00	do, Halves.....	1 50 @ 2 00
do, Cal, per M.....	— @ 12 00	do, Quarters.....	1 50 @ 2 50
Lemons, Cal M.....	— @	Blowers.....	2 75 @
Sicily, box.....	— @ 12 00	Malaga.....	2 75 @ 3 00
Oranges, Mex.....	— @	Zante Currants.....	8 @ 10
VEGETABLES.			
M.....	— @	Beets, cbl.....	50 @
Tahiti.....	— @ 25 00	Beans, String.....	2 @ 2½
Cal.....	— @	Cabbage, 100 lbs.....	40 @ 50
Peaches, bak.....	— @ 1 50	Cantaloupes, case 2	00 @ 5 00
do mountain.....	25 @ 2 00	Carrots, cbl.....	40 @ 50
Pears, box.....	25 @ 50	Cauliflower, doz.....	50 @
do, Bartlett.....	75 @ 1 00	Cucumbers, bx.....	25 @ 40
do, Seckle.....	75 @ 87½	Garlic, New, lb.....	3 @ 4
Pineapples, doz. 5	00 @ 6 00	Green Corn, doz.....	2 @ 7
Plums, lbs.....	2 @ 3	Green Peas.....	2 @
Prunes, lb.....	2 @ 4	Turnips, cbl.....	50 @
Quinces, bak.....	60 @ 75	Paranla, lb.....	15 @ 38
Raspberries, lb.....	— @	Horseradish.....	7 @ 8
St'berries, ch'at 4	00 @ 5 00	Squash, Marrow	
DRIED FRUIT.		fat, lb.....	5 00 @ 7 50
Apples, lb.....	5½ @ 7½	Summer do, bx.....	25 @
do new.....	9 @	Tomato, 50 lbs bx.....	10 @ 20
Apricots.....	15 @	do.....	10 @ 15
Citron.....	23 @ 24½	White.....	50 @
Dates.....	9 @ 10	Walrus's, 100.....	5 00 @ 8 00
Figs, Black.....	4 @ 7		

Southern California
Horticultural So-
ciety's Pavilion.

The Pavilion Lot has a frontage of 200 feet on Temple street, and extends back to Sand street, a depth of 340 ft. The cut here given represents the Temple street front. The Sand street front is reached by easy grade, with no stairs. The Pavilion consists of a main hall, two stories high, with a frontage of 76 feet, by a depth of 132 feet, with an annex 39x60 feet in the rear, to be devoted to the purposes of a Stage, and annexes on each side 50x50 feet, two stories in height, one to be devoted to the purposes of a Machinery Hall, and the other to an Art Gallery. In the angles, in front of these annexes, one-story apartments will be constructed 40x32 feet each, which will be employed respectively for Fine Art and Floral Halls. The Auditorium in the main hall will be 112x76 feet, and with the extensive galleries, will have a seating capacity of 4,000. The Pavilion complete presents a frontage of 176 feet by a depth of 161. The main central hall is now being built, and the wings will be added as soon as the finances of the Society will permit. The Directors intend to build, only so far as they can pay and are firmly resolved to incur no indebtedness.



HORTICULTURAL PAVILION

Now being erected by the Southern California Horticultural Society on Temple street, Los Angeles, only 1,500 feet from the junction of Main and Spring streets, which is considered the center of business.

The First Annual Exhibition of the Southern California Horticultural Society will be held at the New Pavilion during the Week Commencing Monday, October 14th, 1878.

All Premiums will be paid in coin except when otherwise specified. Liberal Premiums are being offered in the following departments: 1st—Agricultural Implements, Vehicles, etc.; 2d—Textile Fabrics and materials from which they are made; 3d—Mechanical Products, Musical Instruments, etc.; 4th—Agricultural Products, Flowers, etc.; 5th—Fruits, Fruit Trees, Raisins, Wines and Brandies; 6th—Fine Arts.

LOCAL DEPARTMENTS.—In order to give each locality exhibiting products at the Fair ample credit for their productions, each town, neighborhood or school district applying for space will be allowed a department of its own, which will be properly designated, and will be as large as is consistent with the capacity of the Hall and the applications for space.

This is the largest Hall south of San Francisco in this State, and the prospects are good that the approaching

Fair will be the largest ever held in Southern California. The Central Pacific Railroad Company will transport all articles exhibited at the Fair, over their respective routes, **FREE OF CHARGE.** Freight being paid on them to the Fair will be returned upon reshipment by the same owner and exhibition of certificate of Secretary that the same has been exhibited. Wells, Fargo & Co.'s Express Company will carry, free of charge, all articles sent to the Fair for exhibition not exceeding ten pounds in weight. Arrangements are being made with the Steamship Company to carry freight and passengers at the usual reductions, particulars of which will be published as soon as definite arrangements are completed.

EXCURSION TRAINS are being organized on all the roads centering at Los Angeles. These trains will carry passengers to and from Los Angeles at less than half the regular rates, and ample time will be given excursionists

to visit the Fair and examine the city and county. The excursion train from the north will start from San Francisco. Particulars in regard to the running of these trains will be made public at an early day.

The Society will have in its Pavilion this year more space than any Fair ever before held in Southern California, and yet the applications for space are so much greater than ever before that those desiring to exhibit should lose no time in making application for space to the Superintendent. Towns and neighborhoods should take steps at once to secure a creditable representation of their respective localities. No charge is made for space or entries. Each exhibitor must hold, however, a Season Ticket, which will cost three dollars. Premium List and Rules and Regulations sent free on application to the Secretary.

The Pavilion will be completed in time for holding of Fair at the day advertised.

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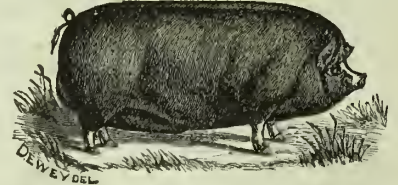
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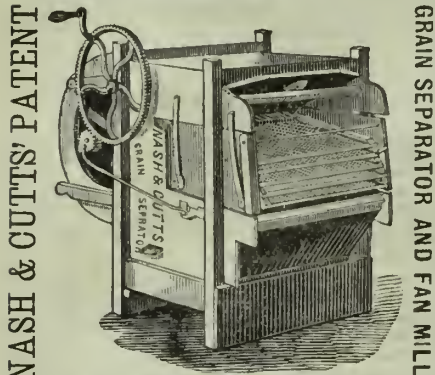
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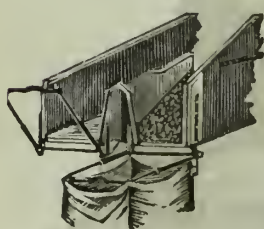
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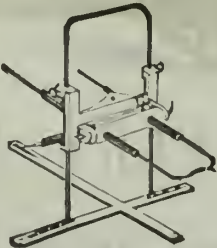
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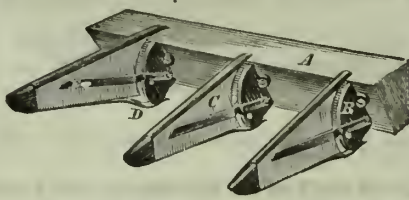
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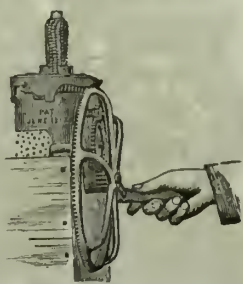
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Peerless Corn Sheller.



It is so cheap (costing only \$6), that almost any one can afford to buy one. It is so rapid, it will shell almost as fast as a \$40 machine, and seven or eight bushels per hour is not above its capacity. It weighs only 13 pounds and is simple and durable. For particulars, address

WEISTER & CO.
17 New Montgomery St., S. F.

CALIFORNIA FRUIT DRIER

Awarded the

CALIFORNIA GOLD MEDAL

AND THE

U. S. Centennial Grand Medal & Diploma

IT IS THE

BEST FRUIT DRIER,

And the only one that proves a success in making the FINEST RAISINS, FIGS, and the Choicest Fruit at the least expense.

Driers of all sizes put up and no pay asked until tested.

GEO. A. DEITZ, Manager,

SACRAMENTO, CAL.

Nurserymen.

SHINN'S NURSERIES.

NILES, ALAMEDA COUNTY, CAL.

We invite attention to our large stock of

Fruit Trees and Ornamentals,

Of the most approved varieties. Also, Coffee, Cork Oak, Olives, Guavas, English and Black Walnuts, Magnolias, Loquats, Butternuts, Small Fruits, Evergreens, Etc. We have a choice stock of the Diospyros Kaki (Japanese Persimmon), of our own growing, and also, grafted stock imported direct from several Japan Nurseries. Address for catalogue and terms,

DR. J. W. CLARK, No. 418 California St., San Francisco,
Or JAMES SHINN, Niles, Alameda Co., Cal.

ESTABLISHED IN 1858.

PEPPER'S NURSERIES.

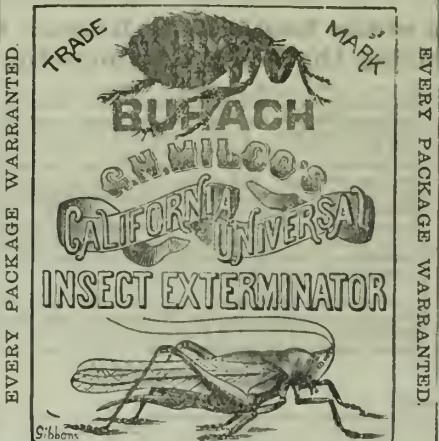
An unusually fine stock of trees is offered for sale at lowest market rates for reliable nursery stock, comprising all the leading kinds and varieties of hardy fruits. Also a general assortment of evergreen trees and shrubs, blue gums, Monterey cypress, etc., in boxes for hedge and forest planting.

My trees are grown in a sandy loam, without irrigation; can be no finer rooted trees grown; wood ripens early, and can be safely transplanted as soon as sufficient rain falls for lifting the stock. Early planting recommended. Catalogues with list of prices ready for distribution October 1st.

Address, W. H. PEPPER,
Petaluma, Sonoma Co., Cal.

TREES!

To Nurserymen, Dealers and Planters:
Send for the full catalogue of the BLOOMINGTON NURSERY. Established 25 years. The past season's growth has been unusually fine. WE OFFER AN IMMENSE STOCK AT LOW PRICES FOR CASH. Address W. F. BAIRD, Trustee, Bloomington, Ill.



This trade-mark is registered by G. N. Milco, May 7th, 1878, in the Patent Office at Washington, D. C.

The most wonderful discovery of the Nineteenth Century.

This is the true Pyrethrum Carneum
INSECT POWDER.

A California Production.

Retail price, 25 cts. and 50 cts. per package.
Directions for use with each package.

G. N. MILCO,

Patentee and Sole Manufacturer, Stockton, California.

Ask your druggist and grocer for it. STEWART & BUCKLEY, Agents,

513 Sansome Street, San Francisco, Cal.

GILBERT & MOORE,

Manufacturers of

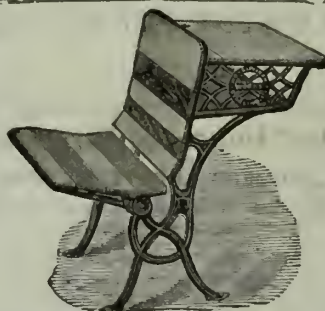
School, Office, Church, Lodge and Household Furniture, Etc.

Sole Agents of Pacific Coast for the

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THE BEST IS THE CHEAPEST IN THE END.

"THE PEERLESS."



Six sizes made, single and double. Send for our Illustrated Catalogue and Price List. School supplies of all kinds in stock and to order. Good reliable agents wanted in every town on Coast.

We offer the best Desk as cheap as the poorest that can be bought.

GILBERT & MOORE,

219 Bush Street, San Francisco, Cal.



Awarded highest prize at Centennial Exposition for fine chewing qualities and excellence and lasting character of sweetening and flavoring. The best tobacco ever made. As our blue strip trade-mark is closely imitated on inferior goods, see that Jackson's Best is on every plug. Sold by all dealers. Send for sample, free, to C. A. JACKSON & Co., Mfrs., Petersburg, Va.

L. & E. WERTHEIMER, Ag'ts, San Francisco.

Seedsman.

R. J. TRUMBULL & CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

*"Guide to the Vegetable and Flower Garden will be sent FREE TO ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc."

R. J. TRUMBULL & CO.,

419 and 421 Sansome Street, S. F.

SEEDS.

SEEDS.

IMPORTED.

Crosby's Extra Early
Marblehead Mammoth
Stowell's Evergreen
Mexican Sweet, New } Sweet Corn.

Early Canada } Yellow Flint Corn.
Early Dutton }

Long Red Mangel Wurtzel } Beet Seed.
Yellow Globe }
White Sugar }

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco

SEEDS.

TREES.

SEEDS.

Continually arriving, NEW AND FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses.

RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

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B. K. BLISS & SONS,

Importers, Growers and Dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS & SONS, 34 Barclay Street, N. Y.

COFFEE SEED.

I will furnish a first-class article to parties desirous of planting. New crop will be ready about the middle of August, 1878. Sent by mail. Send for sample bag \$1 in U. S. stamps. Information on planting, etc., gratis.

H. COOPER,

Kona, Hawaii, Sandwich Islands.

H. H. H.

HORSE MEDICINE,

D. D. T.—1868.

As a horse medicine it is superior to any liniment ever invented. For RHEUMATISM, SPRAIN, SWEET, CALLUS, LUMPS, and all old sores, apply freely so as to blister, from three to five days in succession, and in four or five days, if not cured, repeat as at first. SPRAINS, STIFF JOINTS, BRUISES, WINDGALLS, and all slight ailments, apply a small quantity so as not to blister. Saddle Sores, Cuts, and all other sores where the skin is broken, mix the liniment half and half with any kind of oil, and apply in moderation.

WILLIAMS & MOORE, Proprietors,
STOCKTON, CAL.

Calvert's Carbolic

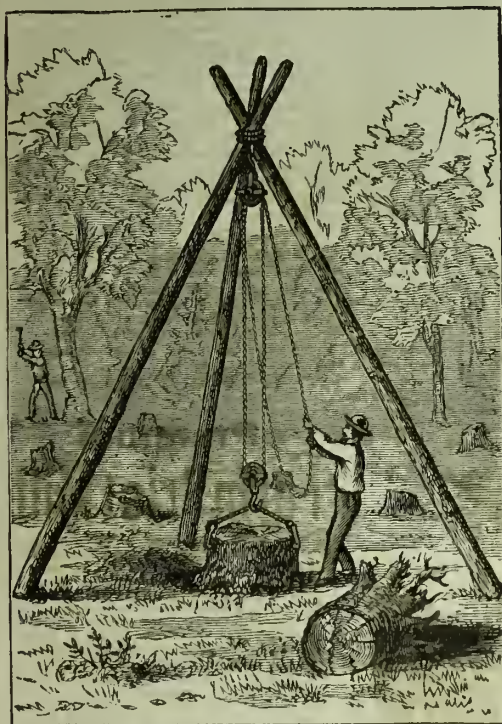
SHEEP WASH,

\$2 Per Gallon.

After dipping the sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.



WESTON'S DIFFERENTIAL PULLEY BLOCKS.



One Man Can Easily Lift
1,000 Pounds.

Load Always suspended; it
can never "Run Down"

Lowering Effected by Pulling
the lack Chain.

One Man With This Tackle
is Better than Four or
Five with the Ordina-
ry Double Block.

AS APPLIED
TO STUMP PULLING.

The general utility of this Pulley and the many different ways in which it can be applied, render it especially serviceable for agricultural purposes. It can be used successfully as a Stump Puller and Remover of Heavy Stones. To Farmers and Woodsmen this Pulley is invaluable, as it economizes both time and labor. In half the time it enables one man to accomplish work which formerly taxed several to perform. For sale by

DUNHAM, CARRIGAN & CO., Agents.

Blunt's Universal

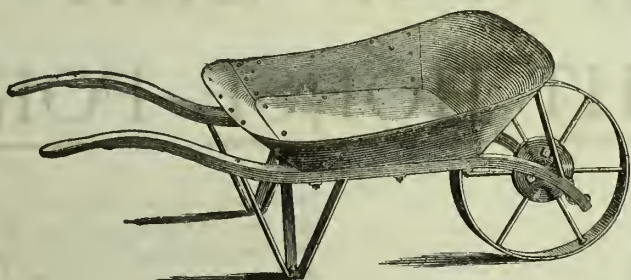
Surface and Deep-Well Pumps. Send for Circulars.

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SAN FRANCISCO.

FRANCIS SMITH & CO.,
MANUFACTURERS OF
THE PATENT CHANNEL IRON WHEELBARROWS,

SHEET
IRON PIPE.



SHEET
IRON PIPE.

The Strongest Barrow Made. These Barrows are made by Superior Workmen, and of the best material. All sizes kept constantly on hand.

Lap-Welded Pipe, all Sizes, from Three to Six Inches. Artesian Well Pipe. Also, Galvanized Iron Boilers, from Twenty-five to One Hundred Gallons.

Iron Cut, Punched, and Formed for making pipe on ground, where required. All kinds of tools supplied for making pipe. Estimates given when required. Are prepared for coating all size of pipes with a composition of Coal Tar and Asphaltum.

Office and Manufactory, 130 BEALE STREET, San Francisco, Cal.

In consequence of spurious imitations of
LEA AND PERRINS' SAUCE,
which are calculated to deceive the Public, Lea and Perrins
have adopted A NEW LABEL, bearing their Signature,
thus,

Lea & Perrins

which is placed on every bottle of WORCESTERSHIRE
SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper.
Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London,
&c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

WANTED—A FARM.

To lease with option of purchase, from 100 to 200 acres of land, with water and timber suitable for general farming, with house of six rooms or more; near to a public school, and within 20 miles of San Francisco, having good communication by rail or water. Address, DAWSON, at this office.

TO FRUIT GROWERS.

DIXIE FRUIT PICKER. Patented, 1877. Sent by mail for 50 Cents. Address, M. H. DELANO, San Leandro, California.



"THE EAGLE CLAW."
The best Trap in the World for catching
FISH, ANIMALS & GAME.

Onebaitwillcatch
Twenty Fish.

No. 1, for ordinary fishing, small game, &c. 35c.
No. 2, for large fish, mink, musk-rats, &c. 75c.

Sent by mail. J. BRIDE & CO.,
Mfrs., 297 Broadway, New-York.

Send for Catalogue of useful novelties and mention this paper.

20 CARDS, all Snowflake, 10c., or 10 Best Chromos, 10c., with name. Samples 3c. J. B. HURSTED, Nassau, N. Y.

Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Pardee.



The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder.

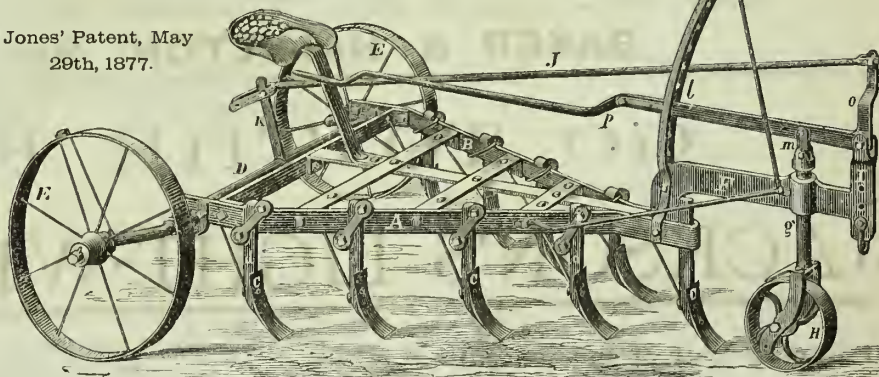
JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

HOLLY & MACOON'S CULTIVATOR.

Manufactured by Holly & Magoon, Stony Point, Sonoma Co., and
Holly & Jones, Lakeville, Sonoma County.

Jones' Patent, May
29th, 1877.

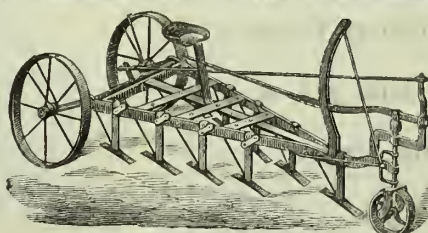


This Cultivator is made by practical men, after years of experience, and better meets the wants of California farmers than anything before offered.

Made of the best material (with wood or iron frame), and warranted in every respect.

Prices
REASONABLE.

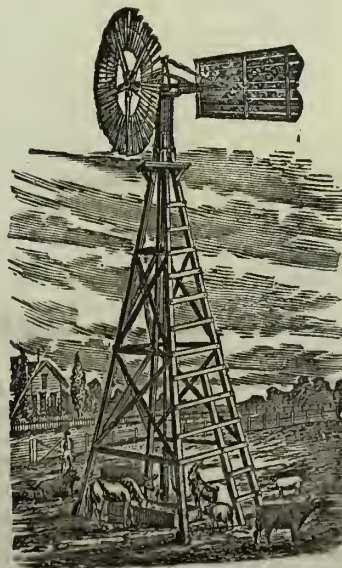
For further information address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Francisco and Sacramento, Cal.



[Our new
DOUBLE-BOX WHEEL

Is a decided improvement, to which we wish to call the especial attention of those who would secure the best and most durable.

Our STRAIGHT CHISEL CULTIVATORS (patent applied for) are self-sharpening and made of the best cast steel, with an improved method of fastening to the standard, approaching perfection itself.



IF YOU WANT A

Wind Mill,

THE MOST POWERFUL AND THE NEAREST PERFECTION
OF ANY IN USE—ONE THAT PROTECTS ITSELF IN A
GALE, WILL KEEP YOUR TANK FILLED WITH

Water Without Waste and Without Attention,

EXAMINE THE RECENT

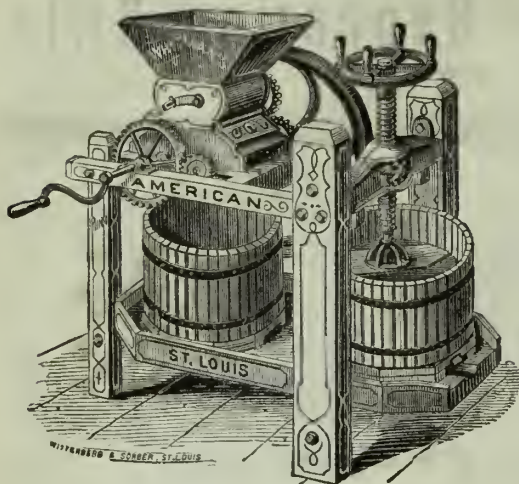
Improvements of Mr. Bachelder,

As now Manufactured by the

Bachelder Manufacturing Co.,

NAPA, CAL.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn. 25 FASHIONABLE VISITING CARDS—no two alike, with name, 10c. Nassau Card Co., Nassau, N. Y.



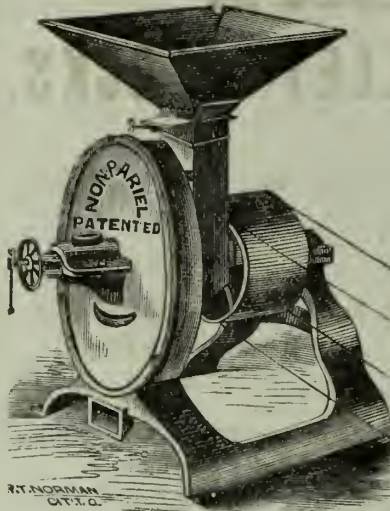
No. 1 Buckeye Cider Mill.

The Latest Improved Buckeye & Americus CIDER MILLS.

Our mills are constructed upon a principle entirely different from other portable mills now in the market. It is embraced in a single frame 2 1/2 by 3 feet, has a two-inch wrought iron screw, is neatly and substantially made, is conveniently moved from place to place, and is easily worked by hand. Two men can grind and press from 6 to 10 barrels per day. This mill crushes the apples instead of grinding as most others do. It has three cast iron cylinders with straight fluted ribs, the first or upper cylinder crushing the apples into a coarse pomace and then feeding it through the lower cylinders, which crush it into a fine pomace, it being impossible for any to pass through without being thoroughly crushed. You may grate or cut an apple fine, but unless the particles are bruised or mashed you cannot press out the cider.

PRICES OF

Buckeye Senior No. 1, 2 tubs, \$55
Buckeye Junior, No. 2, 2 tubs, 30
Americus, Large, No. 1, 2 tubs, 55
Americus, Small, No. 2, 2 tubs, 30



Nonpareil Grinding Mill.

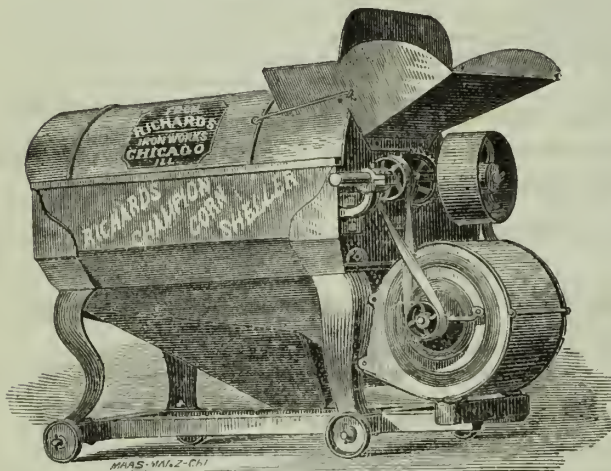
Nonpareil Crushing and Grinding Mill.

NONPAREIL CRUSHING AND GRINDING MILLS will crush and grind corn in the ear, with or without the shuck, prepared Bones, Drugs, all kinds of Spices, Nut Galls, Corn Meal, Feed of all kinds, and all articles, not gummy, that an iron mill can grind. All these Mills are self sharpening, run equally well either way, are very simple and strong, and warranted to be durable, to the satisfaction of every purchaser, and to crush and grind as stated - the necessary power and motion being given to the Mill. As they are self-sharpening, they require no dressing, picking or repairs. They are conveniently portable, easily set up and started, and require but little power to run them. This Mill can be readily attached to any kind of power, horse or steam, and is sold at LESS THAN ONE-HALF the cost of burr stone Mills of corresponding capacities. Powers for running all these Mills constantly on hand. Descriptions and prices sent on application.

PRICES:

No. 1 NONPAREIL GRAIN MILL - 16-inch plate, 356 lbs., 6 to 10 horse-power; pulley, 6x10; runs from 800 to 1,600 revolutions per minute; 10 to 30 bushels per hour. Price with extended shaft and fly wheel of 75 lbs. \$100
No. 2 - 240 lbs. 13-inch plates; pulley, 5x10; 3 to 5 horse-power of any kind; runs from 800 to 1,600 revolutions per minute; 6 to 8 bushels per hour. Price with extended shaft and fly wheel. 75
No. 3 - 150 lbs., with fly wheel; pulley, 4x6; 9-inch plates, with fly wheel. 50

Richard's Improved Corn Sheller and Separator

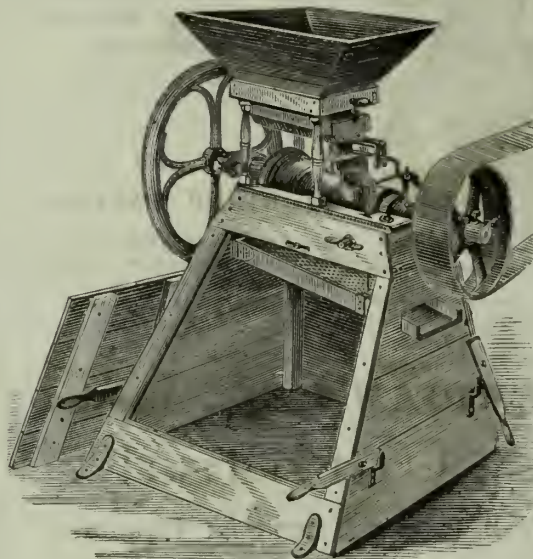


Richard's Improved Corn Sheller, \$225.

Is made exclusively of iron, and combines all essential requisites of strength, simplicity and durability. They shell perfectly clean in any condition of grain, without cutting or grinding it, and clean the corn in first-class condition for market.

This Sheller is adapted for mills and light shippers, and is generally placed in the Mill or Elevator that farmers can drive up beside and shovel their corn directly from the wagon to the Sheller, thus dispensing entirely with all extra labor, and will shell as fast as two men can unload from the wagon.

We also have a large variety of other corn shellers, both hand and power. Send for ILLUSTRATED CIRCULAR and price list.



Premium Farm Grist Mill.

Premium Farm Grist Mill

Has valuable improvements, which we have recently made, which renders this Mill still more efficient and more durable, by the use of a device, so as to prevent the cylinder from coming in contact with the concaves. The grinding plates are CAST STEEL. It is adapted only for power, and for grinding meal and feed. As a farm mill it is unsurpassed, and we recommend it to all who do not wish to incur the expense of the French Stone Mill. The grinding surfaces are of chilled iron, so arranged as to be self-sharpening, and working constantly for years without repairs. It is adapted to any power from one to four horses, and will grind Corn, Rye, Oats, Wheat, etc., fine or coarse, as may be desired. Driven by a two-horse railway power or four-horse lever power, it will grind from six to ten bushels per hour, and crack from ten to twenty-five bushels per hour; and driven by a one-horse railway power or a two-horse lever power, it will grind from three to five bushels per hour, or crack six to twelve bushels per hour. It is also arranged with steel cutters to GRIND CORN IN THE EAR. It occupies a space of about three feet square and weighs about 275 pounds.

Prices of Premium Farm Mills.

With Steel Grinding parts, with Fly Wheel and Sieve for Sifting Corn Meal. \$ 75
With Steel Grinding and with Bolting Attachment for making Family Flour. 100
This mill can only be obtained from Baker & Hamilton, San Francisco and Sacramento.

BAKER & HAMILTON, San Francisco and Sacramento.

GO TO THE FAIR AND SEE JACKSON'S LIGHT-WEIGHT HORSE FORK.

It is only half of the weight of the heavy clumsy Forks now in use, and yet a stronger and more durable Fork.

It is neatly constructed of a light frame. The head formed of two pieces, one each side of the frame. The tines passing through them and the several pieces of the frame, locking the

It is marvelous that men will use and be satisfied with so heavy and clumsy an implement, when one so remarkably lighter can be as easily made. Let us estimate the saving per day by the use of the Light-Weight Fork, basing our calculations on 1,000 loads per day to supply a thresher, 20 feet the average distance to move the grain, 30 pounds the difference in weight of the Forks. Thirty pounds moved 20 feet 1,000 times equals 30,000 pounds moved 20 feet each day, or, in other words, 30 pounds dragged at the end of a rope four miles in addition to a hard day's work in the hot sun. This is a low estimate of the practical saving by using

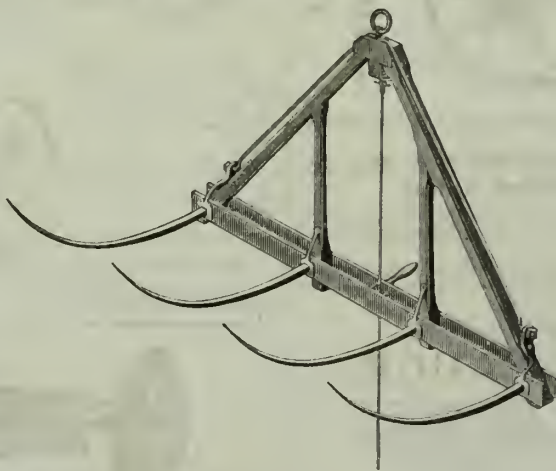
Jackson's Light-Weight Fork.

And when used with my Power Hoist, the saving in labor is still greater by reducing the weight and friction in the rope. It is an old saying, that it was the last straw that broke the camel's back, and it is very applicable in this case. By leaving off the last 30 pounds in the weight of the Fork and giving it the proper shape, plenty of men can be found to operate it at reasonable wages.

Come to the State Fair at Sacramento and see the Fork in operation, in connection with my Power Hoist, attached to my Derry and Low Table, together with my celebrated Feeder and Elevator, attached to a late improved Pitts, also made by me. For further particulars address,

BAKER & HAMILTON, Agents, S. F.

BYRON JACKSON, Woodland, Cal.



frame firmly between them, and by means of a light iron brace from each tine to the frame. The strain in lifting the load is brought to bear straight with the grain of the wood in the several pieces of the frame, having no twisting strain on any portion of the Fork. The two head pieces serving only to space the tines and stiffen the frame.

The latch spring is protected so that it never fails to do its work.

The bail is so protected by the frame that it is not subject to being bent out of shape, and is made very light.

In short, this Fork is constructed upon common sense scientific principles, and every ounce of weight left out that is not needed, weighing only 35 to 40 pounds; while those now in use weigh from 60 to 75 pounds.



Volume XVI.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 21, 1878.

Number 12.

A Curious Edible Fungus.

Our engravings on this page represent two specimens of a curious edible fungus found in different parts of the United States, and known popularly as "Tuckahoe" or "Indian Head," and botanically as *Lycoperdon solidum*. It belongs to the same genus as the "puff-balls," but instead of growing above ground as puff-balls, it is subterranean and is found attached to the roots of large trees, upon which it is parasitic. As seen in Fig. 1, a piece of the root is often found enclosed in the mass of the fungus. The form in which this *Lycoperdon* is commonly found is roundish and about the size of a man's head, and it is frequently used as food by the Indians. From these two circumstances is derived the common name "Indian head." Indian bread would not be inappropriate, for when the fungus is broken open, it has the appearance of dried dough, being full of cavities and very granular in its structure. The outside surface of the fungus is rough, filled with cracks and of a dark, ashy black color; inside, its color is whitish and starchy. Chemical analysis shows the composition of the fungus to be nitrogenous matter, 4.06; mineral substances, 1.61; starch, 81.80; water, 12.50. It is pronounced highly nutritious.

This "Tuckahoe" is one of the most famous of the edible fungi and has long been known for its good qualities. According to Dr. John Torrey, it was first brought to the notice of the public by Dr. Clayton, who sent it to Gronovius, under the name of *Lycoperdon solidum*, and as such described it in the *Flora Virginica* about one hundred and twenty years ago. Next it was described by the late Dr. Von Schweinitz, in his "Synopsis of the Fungi of North Carolina," under the name of *Sclerotium cocos*. About the same time, Dr. Macbride, of Charleston, South Carolina, sent to the Linnaean Society of London his observations on that fungus. Without being aware of having been anticipated by Schweinitz, Dr. Torrey described it in the *New York Repository* about the year 1819, under the name of *Sclerotium giganteum*. He gave also a chemical analysis of it, showing that it is chiefly composed of a singular substance named sclerotine. Braconet, some years after this, described the same principle, which he called pectine. In the *Synopsis Fungorum* of Fries the fungus is called *Pachyma cocos*. In the *Proceedings of the Linnaean Society of London* is an account by Rev. E. J. Berkely of a large subterranean fungus that is sold as food in the streets of Shanghai, undoubtedly the same as the Tuckahoe.

FLORICULTURAL AWARDS AT THE MECHANICS' FAIR.—The only premiums awarded this year were in the department of floriculture. There were six premiums offered. Of these, the first, \$100, for continuous display of plants and flowers, was awarded to Miller & Sievers, of S. F.; second, \$75, to James Hutchison, of Oakland. The first, \$30, for cut flowers, was awarded to Mr. Hutchison, of Oakland; second, \$20, to Thomas Saywell, of S. F. For amateur displays of cut flowers there were two premiums and but one exhibitor, Mr. E. A. Upton, who was awarded \$15. The floral display was well maintained, one of the largest exhibitors being Woodward's Gardens, but their exhibit did not come within the conditions for prize taking. The judges recommended that the Gardens be given a special premium.

WILLIAMS, Colusa county, is to have a \$10,000 flour mill.

The Dairymen's Meeting.

The third annual meeting of the California Dairymen's Society will be held in this city, beginning on Thursday evening, October 10th, and continuing its sessions on the day following if the interest is enough to warrant it. The first meeting is set for the evening so that those coming from a distance may have a little time in the afternoon to transact any business they may have in the city and then be on hand at the opening meeting in the evening. It also gives opportunity to attend to those living in

facturing the milk into butter and cheese, and of marketing the products to the best advantage of producers, are important to discuss, because all of them may be improved if practical ways are devised to accomplish it. The chance of developing a foreign market for our surplus products, and the steps to be taken to secure this desirable result, should all be considered by a full representative gathering of dairymen, and then doubtless some progressive measures would suggest themselves.

It should be borne in mind that the meetings are open, and a free invitation is extended to all

Fig. 1

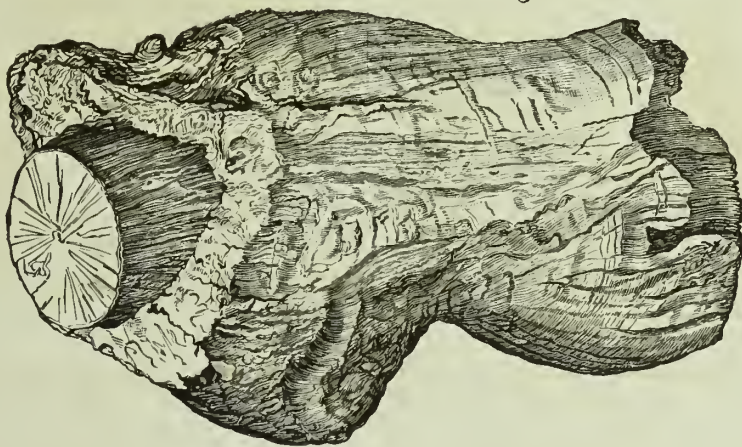
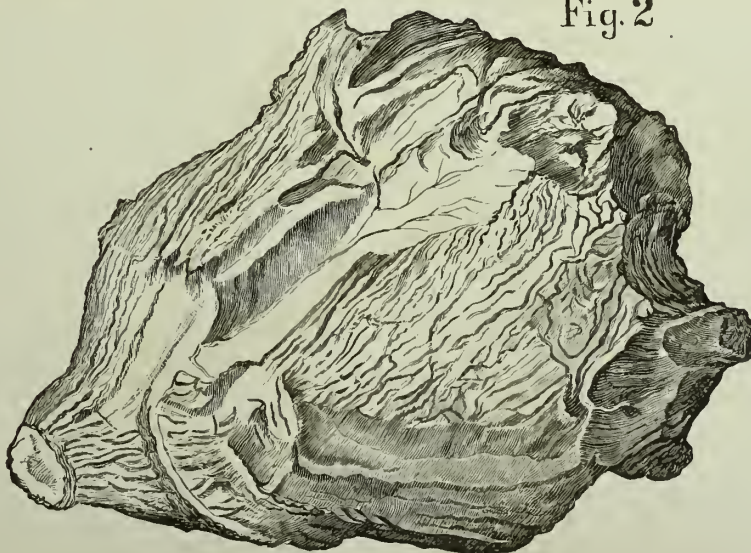


Fig. 2



TUCKAHOE OR INDIAN HEAD.—*Lycoperdon Solidum*.

the city who are interested in dairying, but cannot attend meetings during business hours.

It is hoped that the meetings this year will be better attended than ever before. The published transactions of previous meetings have been widely read and much interest has been expressed in the work of the society. The trouble has been heretofore that the attendance was not large enough, consequently a wide range of experience has not been drawn upon. If every one who is practically interested in the progress of dairying would make it a point to be present this year, there would be an experience represented which would make the discussions of incalculable advantage to all who listen and take part in them. All the questions of breeding and feeding dairy cattle, of manu-

facturing the milk into butter and cheese, and of marketing the products to the best advantage of producers, are important to discuss, because all of them may be improved if practical ways are devised to accomplish it. The chance of developing a foreign market for our surplus products, and the steps to be taken to secure this desirable result, should all be considered by a full representative gathering of dairymen, and then doubtless some progressive measures would suggest themselves. It should be borne in mind that the meetings are open, and a free invitation is extended to all

THE King of the Hawaiian Islands has approved an Act to promote the construction of railroads in the Kingdom, and money has been already appropriated for a preliminary survey of the Panto railroad.

Sowing Oats and Reaping Barley.

Akin to the belief which some readers of the *PRESS* cherish that wheat turns to darnel seems to be an opinion held by some English farmers that one may sow oats and reap barley. It is in advance of anything Mr. Darwin has ever been able to prove, and he is generally credited with being the most ardent upholder of "change," which we learned in our school days was "stamped on everything." We have no faith whatever in such to and fro development as our friends advocate for the grasses, nor do we propose to discuss the question theoretically. We have printed all of the "reasoning" on either side which we care for this year. If the proposed experiments are made at the University, we shall give the results. Until then we hope the discussion has ended.

We are drawn to the subject merely to state the results gained by the Bedfordshire "field club," in a test just concluded, as to the mooted change from oats to barley. It seems that the English belief is that oats can be turned into barley by a certain number of cuttings during the growing season. Therefore the Bedfordshire club sowed three kinds of oats at three dates, March 27th, April 11th and July 5th, 1877. As these oats grew they were cut down at intervals during the season, so that the earliest sown was cut seven times, the second sowing six times, and the third sowing three times. By the time these cuttings were all made, the date of November 25th, 1877, had arrived, and the plants in the patches had become considerably reduced in number by deaths after one or the other of the series of cuttings. On November 25th, the patches were covered with "cinder ashes," to protect them during the winter. In the spring of the present year, some of the frequently decapitated plants started again to grow and they were permitted to ripen. In July last the patches stood as follows: On the earliest sown patch there were standing three oat plants and one barley plant; on the next sowing there were 19 oat plants and one barley plant, and on the latest sown patch there were 13 oat plants and no barley plants. The seed sown in these experiments was purchased in the market, and when the oats were separated for planting, it was found that more than 10% of the "oats" bought consisted of barley or other grains. Such are the facts from the experiment of the English farmers' club.

Readers will probably differ in opinion as to whether those two barley plants came from the oats or whether the barley passed the scrutiny of the experimenters. One thing seems sure enough, however, and that is that this was not a good year to reap barley from oat sowings, because even if the transformation took place, there was but a very small percentage of the oats took advantage of it.

There was a side experiment took place, which is interesting in this connection. Barley was sown and cut down frequently as the oats were during the season of 1877. This spring, instead of showing a great mortality as the oats did, this barley started up vigorously and covered the ground as thickly as it did a year ago. There is a conclusion of practical value in this experiment irrespective of the vexed theory of change, and that is that barley will stand cutting off much better than oats, and the proof of it may be of value when we are discussing mowing over rank fields.

THE Russians have at last occupied Batoum.



CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds

On the Growth of Alfalfa.

EDITORS PRESS:—I am fearful that I will become a burden to you, but I am running an experimental farm on my own capital, and having no source of information in my own State, I am compelled to go abroad for help or light on matters that I do not understand myself. My aim has always been to hit the mark if possible, but, in June, 100 pounds of alfalfa seed from California. I had plowed in the previous fall four acres of land of a sedimentary sand formation. This soil is eight feet deep, resting on dark alkaline clay two feet thick, and the clay rests on coarse gravel and sand. I sowed the 100 pounds of seed on the four acres on the 7th of June, brushed it in, and there came a nice shower on the 8th and in due time it came up nicely and thick. I mowed it in the latter part of August when it was in bloom. I had irrigated it once, and after cutting I irrigated it again. After this I pastured four horses on it till the frost killed it on the 25th of October. The fall rains and the winter snow has kept the ground moist enough for all kinds of seed to come up well. Our cold in December and January froze ice on the creek 11 inches thick in still places, and now my alfalfa is fully one-half dead. I send you in this letter a root to show the condition of all the dead ones. You can get a good idea of the condition of the soil from the following: I dug down far enough to get a good handhold and then pulled the root up. It ran straight down. I have tied a string around the root where the dead part stops; the balance of the root is alive and appears all right. Now, what killed my alfalfa? Are not the soil and our climate and conditions favorable to its growth? Will those roots send out new shoots from below, or will they keep dying on down? Would it have been better to have irrigated it in the winter and had the ground as full of water as it could be, as it was good and marsh?—E. R. SIZER, West Las Animas, Colorado.

EDITORS PRESS:—On my return from the East, I found in a file of correspondence that accumulated during my absence, a letter from you, inclosing one from Mr. Sizer, of West Las Animas, Colorado, together with an entire alfalfa root and its stubble from Mr. Sizer's alfalfa field in Colorado.

Mr. Sizer asks questions about alfalfa, which you too confidently refer to me for answers. I will, however, tender such answers as I deem most nearly relative to the case.

The alfalfa root is, writes Mr. Sizer, from a sowing made on the 7th of June, 1877, and was, I infer, dug in the middle of April, 1878. It is 31 inches long, its greatest diameter being 3-16 of an inch. The soil, says Mr. Sizer, is a "sedimentary sand formation, eight feet deep, resting on a dark alkaline clay, two feet thick, and this resting on coarse gravel and sand." In May, Mr. Sizer says, fully one-half of the alfalfa was dead. Ice, 11 inches thick, formed on the creek near the alfalfa field. The root before me was dead when taken up down to the string tied around it by Mr. Sizer. The string is tied three inches below the surface end of the root.

While the destruction of the alfalfa was most likely the result of freezing, it was not necessarily so. Under other circumstances it might have survived even colder weather. I personally examined several alfalfa patches at the railway stations along the route across the American desert and Rocky mountains, and found the alfalfa all alive and flourishing, after having been subjected to a temperature that covered the mercury to 10° below zero. Alfalfa survived the winter in places where ice formed over a foot thick. I made inquiries of the citizens of Colorado, Utah and Nevada who were traveling on the same train with myself, and who cited cases away from the railroad that agreed with the cases at the railway stations. A farmer of Utah, who got on the train east of Ogden, said his alfalfa was not hurt by a temperature that formed ice over a foot thick. I asked him if his alfalfa was covered with snow at the time of the cold snap. He replied that it was in some instances, in others not. I then asked him directly if he could recall a case in which his alfalfa survived the low temperatures referred to without a covering of snow. He answered affirmatively. I have seen records of temperature for Salt Lake city, showing that the mercury goes down below zero in that city. Alfalfa flourishes in and around Salt Lake city, and in other portions of the Territory where it is known to be colder than in Salt Lake city.

More low temperature, therefore, cannot account for the destruction of Mr. Sizer's alfalfa. True, it may be that, without cold weather, the alfalfa would not have perished, but we must search for causes that increased the liability or susceptibility of the plant, or, in other words, causes that co-operated with the cold.

Mr. Sizer sowed the alfalfa seed on the 7th of June. It ought to have been sown in April. An April sowing has more time to grow before the first winter. The older, the thicker, the longer, the tougher the alfalfa, the more apt it is to go through the winter without harm. The specimen root sent made fair penetration downward, but, for want of time or something else, did not thicken proportionately. Mr. Sizer mentioned a substratum of alkaline clay, but said nothing about alkali in the superimposed stratum of alluvium. Knowing the tendency of alkali to rise to the surface, I presume that more or less of it pervades the soil all the way up to the surface. If so, it is plain that the alfalfa might have lacked constitutional vigor on account of the alkali. A deficiency of vigor in vegetable life is attended with corresponding liability to receive damage from conditions inimical to vegetable life. I have seen patches of alfalfa grow and measurably prosper in alkaline soil for one or two years, and then die out on account of the same deficiency or excess of moisture that did no perceptible permanent injury to the alfalfa on the immediately adjacent and less alkaline soil. Two peach orchards in

east Tennessee, one on the French Broad river, 15 miles above Knoxville, and the other on the Richland hills of Granger county, 25 miles from Knoxville, were partly cultivated and partly left to sod. All the trees in each orchard bore fair crops every year when there were no late killing spring frosts. Not one tree in either orchard bore any fruit in those years when there were late and generally killing spring frosts. But in some of those years, when the late spring frosts were only severe enough to kill the peaches in places, the two orchards would present the following remarkable facts. The trees in each orchard within the plowed areas would have a partial crop, while the trees within the unplowed areas, the areas of sod, would not have a single peach. Now, what is the explanation of these phenomena? It seems to be this: The cultivated trees were more vigorous than the uncultivated trees, and were better qualified to resist the effects of the frost. A man in vigorous health will survive a low temperature that might destroy the same man in a period of invalidity. These analogies strongly intimate that Mr. Sizer's dead alfalfa might have been partly devitalized by alkali or some other cause, and more easily lost the remaining vitality when the mercury sunk to the vicinity of zero.

I think the alfalfa killed down as far as the sample sent will not sprout and come again. Had it died from below up to within say four inches of the surface, I would expect it to grow with merely temporary retardation in a case where no permanently inimical conditions exist in the strata below.

Winter irrigation might, by interposing water between the alfalfa roots and the freezing air save the roots from frost blight. Such protection kept up during the long period of dangerous cold weather, might prove that the remedy is as fatal as the frost. Alfalfa will stand more water in cold than in warm weather. But two or three weeks' submersion even in winter is rather too much for alfalfa, though I have known it to survive a submersion of nearly a month in winter. Every remove from complete submersion would lessen the liability to water blight, but would, *pari passu*, lessen the protection against frost.

Upon the whole, protection from frost by winter irrigation is rather out of the question.

Mr. Sizer's letter having the ring of never despair, I will merely add that he might plow his alfalfa field six or eight inches deep, and re-sow. The underturned alfalfa root will come up and prosper with the new alfalfa. Always mow rather than pasture, especially the first year. Now as soon as a few scattering blooms appear; irrigate immediately after mowing. If alkali comes to the surface, convert the field into lakes and turn the lakes loose to flow away carrying the alkali in solution; leave a heavy unmown crop on the ground, the first autumn after sowing, to shelter the roots the first winter. If there is an option between alkaline and non-alkaline soil, give the non-alkaline soil to alfalfa and the alkaline to beets, onions and cabbages. It should not be forgotten that one-half of the alfalfa survived the Colorado winter, although sown as late as the 7th of June. The other half very likely did not more than barely miss survival, and possibly would not have perished had its period of thickening, deepening and toughening been lengthened by the time between an April and a June sowing.

While this correspondence is in a scuse limited in its objective relations, its scope enlarges when one thinks that Mr. Sizer's alfalfa utilizes only one of thousands of suitable places for alfalfa scattered over the great American desert. Never until my last crossing of that desert did I know what a stupendous mistake was made when it was named the "alkali desert." There is comparatively very little alkali from Cheyenne to Truckee. Give that region plenty of rain in season, which it has not, and the so-called alkali desert could be converted into a vast wheat field. As it is, I saw a wheat field of moderate production in about the dismal sage brush region of the desert. At another wretched sage brush spot I saw flourishing young locust and Lombardy poplar trees. A little irrigation aided the trees.

JOHN H. SHIELDS.
Los Angeles, Cal., August, 1878.

On Tramps.

EDITORS PRESS:—I am a close reader of your valuable paper and in the number of August 31st, I saw some remarks in regard to the "genus tramp." I am inclined to the belief that much can be done to mitigate the evil, if not to entirely root it out of the land.

I am so situated that I have a most excellent opportunity to examine the subject and study it closely, which I have done for a good many years, and think you will agree with me that something can and ought to be done to lessen and, if possible, abate the evil.

A statement of the farming interest for one year will give you a pretty clear view of my argument. We commence plowing to put in volunteer and summer fallow about the first of October; that requires some extra hands. The tramp with his pack makes his appearance, many more than are needed. They go through the country begging and getting a little work here and there, and when they are paid, however small a sum, they seek the saloon, make a deposit with the barkeeper and remain until all is drunk up. Then they go out again in the same way as before, and nearly all who find

work make way with their earnings in this manner. By the first of March the tramps have left us.

By the first of June we commence harvesting, and the country requiring more men to take the crop off than it does to put it in, the tramp now becomes truly formidable, and nearly every dollar goes into the hands of the saloon keeper and gambling hells.

To my mind the remedy for the evil is easy and plain. If the laborer could save his money, he would not be under the necessity to be a tramp; but as long as the saloons are present he is brought in by stool pigeons, and it seems as if there is no such thing as resisting the influences that are made to bear on him. Let the framers of the new Constitution insert a clause requiring the Legislature to make laws to submit the question of granting licenses for the sale of liquors to a vote of each magisterial district, and then any community can get rid of the curse of tramps if they wish.

Modesto, Stanislaus Co.

OBSERVER.

Treatment for Glanders.

EDITORS PRESS:—Seeing in your valuable paper that the glanders was bad about the city, and having had some experience in the treatment of the disease in Illinois some years ago, I send the directions for treating them as I did, and I cured a number of cases.

Recipe for the condition powder used: One-quarter pound sulphur; one-quarter pound alum; one-quarter pound copperas; one-quarter pound rosin; one-quarter pound saltpeter. Pulverize and mix. Dose, one tablespoonful twice a day in ground feed.

Injection for the head: One-half pint spirits turpentine, one pint sweet oil, mixed. Use a large syringe, with a long tube, bent so as to stand at one side of the horse.

Bathe the glands with the following liniment: One egg; one-half pint vinegar; one-half pint spirits of turpentine, well shaken together.

Keep the horse warm. W. P. A. CRAIG.
Lovelocks, Nevada, Sept. 14th.

Letter from Santa Barbara.

Plaster Casts for Outdoor Decorations.

EDITORS PRESS:—I would willingly have complied with your request sooner, to send directions for preparing plaster casts of statuary waterproof for fountains and general outdoor decorations, but I have put away my notes on it so well that I cannot find them, owing to making changes in my library; probably will find them some time, but will tell you how I prepared one piece for my pound lily fountain. Owing to the rascality of some drunken person, I only enjoyed the pleasure of it ten days, so I cannot tell how well or how long it would answer. I have an idea it would be a success. If any one knows of a better way after reading mine, let them please inform your readers. Now for my way: Prepare a sizing of best white glue, give one or two coats, carefully covering every indentation, as any little spot left uncovered by the sizing would soon turn black. If a hole is left for water pipe to pass through, pour some of the glue through. When well dry, give two coats best white (lead and oil) paint. When each one is dry, give a thorough covering with Demar varnish, let it dry, then another, and while yet damp, sift over it finest powdered Paris white. It must be done quickly, as the Demar dries very fast, and some places would not get covered well. If bronzed statuary is preferred, get bronzed powder instead of Paris white, and coach varnish instead of Demar.

It may seem difficult to do after reading so much about it, but I find it as easy as spatter work, which, by the way, reminds me to tell the ladies that spatter work for covering the openings of fireplaces, if done with large fern fronds and grasses, and a handsome center of some wood cut, is both cheap, easy to make, and lovely.

Agricultural Education.

As the little ones say, I thank you more than tongue can tell for the kindly interesting way in which you answered in the RURAL of July 27th, my difficult question, what to do in the way of giving a boy and girl a good practical agricultural education; and I feel sure from the many anxious parents I have canvassed the subject with, that you have helped many others than myself. My boy has only had one year of farm life so far, and is under a great disadvantage, that his parents are never likely to have a farm of their own; but we want him to have one and know how to make the most of it, and he has had constant training of different kinds of work most of his hours out of school. My experience is that such training goes far to make a farmer that will not let gates hang by one hinge or a good building go to ruin for a little paint, or let the flower garden be hid with weeds and dust, while the boy that spends his time out of school fooling round and whose life expresses idleness as nearly as anything, will let things go to pieces.

I know one noble girl in Amador county, who had to give up her studies on account of failing eyesight, who has taken up a claim of land and

lives in her little cabin with a lady companion, and expects to make it her life work to develop the resources of her own acres. Don't you think such a woman deserves the right of suffrage much more than an ignorant and drunken man? Most of the earnest thinking, reading women are beginning to see why they should have equal rights with mankind now, but it seems that the hardest thing of all for either men or women to do is to learn to labor and be producers as well as consumers. I hardly expect you to give space to this long, rambling letter, but I do want to sweep aside the curtain a little to let you see what kind of ground the good seed you cast forth has fallen upon.

MRS. G. E. CHILDS.
Santa Barbara, Cal.

THE VINEYARD.

A Warning against the Proposed Treaty with the French.

EDITORS PRESS: The following circular is addressed to the vine growers of California: I feel it my duty to call attention to the urgent necessity of looking well into the Treaty that it is now being proposed to enter into between the United States and France. Either there must be a great apathy amongst the vine growers of our State, or they must be unware of the utter ruin that menaces their interests should that Treaty be ratified by our Government. To make you understand the full extent of your danger, it is only necessary to mention that in this Treaty is proposed to reduce the duty on all French wines in casks to 20 cents per gallon; on wines in bottles to 50 cents per dozen, and on brandies and spirits to \$1 per gallon! Need I say more?

You have labored hard and devotedly, some of you for 20 years, to bring your vineyards and wines to the point of perfection to which they have arrived. All these years you have struggled against a blind and unjust prejudice—against Time, usurious rates of interest, low prices, a slow appreciation of your efforts by men of wealth, and a still lower one by our Government. It is not enough to have your vineyards decimated by the ravages of that terrible scourge, the phylloxera, but it is now proposed to sweep away at one swoop, the entire results of your hard labor and long struggles. And this is to be done without consulting either you or your interests; by a single stroke of the pen; by the ratification of a treaty devised by cunning minds, and made plausible by the artful tongues of your foreign competitors? And will you stand idly by and see it done?

I am informed that after M. Leon Chotteau, delegate from the commercial bodies of France, submitted his views upon this Treaty to the San Francisco Chamber of Commerce, that that body gave him its endorsement!

Do you not see your danger? This endorsement is to be used against you. And so is that of every Chamber of Commerce in the United States, which may have been either selfish enough to give its endorsement for its own advancement, or blind enough not to see the utter annihilation of one of the greatest future interests of our country.

You have no time to spare; the Senators and Congressmen of the Pacific coast, who have always been your truest friends, are yet amongst you; but their stay will not be long, and it behooves you to act at once. I know, that, owing to the vintage but few of you can come to the city, and it would therefore be almost useless to call a meeting of the State Society. But gather yourselves together in local clubs and societies; collect your arguments; give your views, and above all, make them strong and to the point. Send these either directly to our coast representatives at Washington, or authorize some person or persons in this city or among themselves, to wait personally upon our Senators and Congressmen, and make them fully aware of the dangers that menace your very existence.

Should this Treaty take place, a few more short years will count wine making in California a thing of the past! And all your toil, all your sacrifices, and the best years of your lives will have been spent in vain!

ARPA HARASZTHY.
San Francisco, Sept. 10th 1878.

How GRAPES RIPEN.—According to *Comptes Rendus*, St Pierre and Magnien have arrived at the following conclusions in regard to the changes which grapes undergo while ripening. During the process they evolve carbonic acid in darkness as well as in light, when exposed to the air or placed in an indifferent gas. The amount of oxygen evolved in air is always in excess of the oxygen taken up; this has been remarked in the case of observations extending over a long space of time. Grapes can absorb or give off water according as they are placed in a moist or dry medium. As the change goes on the acids decrease in amount, while the quantity of sugar increases. The acids and the glucose are carried to the grapes by the sap. Here the acids are slowly consumed, while the sugar increases in point of concentration, and at a still later stage the sugar itself is consumed.

HORTICULTURE.

The Prunes of Bordeaux.

W. B. West, the well-known Stockton nurseryman, is traveling in pursuit of health in Southern Europe, and at Bordeaux studied the famous prune interest of that locality. From a letter which he wrote to the *Bulletin* we take the essential points: The variety grown here is what we call the *Petite pruned Agen* or the Burgundy. In San Jose it is sometimes called the little French prune. It looks much like it does in California; it is no larger, if it is quite as large. Most of our trees being younger, produce a little better average of fruit. It has the same faults that it has with us. It cracks in uncongenial soil when overcropped or badly cultivated. I saw many wormy specimens, a fault that I never saw in California. The tree is a slower grower than with us, but eventually makes a fine tree. I should judge it to be about as large at 12 years of age as ours would be at eight. The soil upon which the best trees are growing, is a strong, clayey loam, in some places quite as tenacious as the adobe of California, but not so rich. The crop is not so sure as with us, there being many off years. This gives the tree a better chance to attain large size and longer life. Most of our trees are allowed to produce such large crops that they become prematurely old and stunted. Much care is taken in training the trees. One form that is popular for prunes and pears is the *vase*. The tree, when completely formed, resembles a vase or goblet, with a stem four or five feet. The object is to admit the sun into the center of the tree and allow a greater amount of action on the fruit. They claim also that it resists the wind better, and that the fruit is not so much injured by storms. Whether this mode of training would be advisable in California is questionable. In some parts the tree suffers from exposure to the sun. I have no doubt that on the coast the fruit would be better for it.

How the Fruit is Cured.

The crop will not be ripe until the 20th, so that I shall not see their mode of curing, but I have it from the peasants, who cure the prunes and sell them to the packers. There are secrets in the management of the prunes in the factories that are not easily got hold of; but there is not much that our people will not find out, only give them the prunes and a little experience. The packers receive the fruit from the grower, as I said before, in a dried state. They assort them to different sizes and value, and pack them in attractive boxes for shipment. The management of this fruit has often been published, and I can add but little to it. The prunes should remain upon the tree until they are perfectly ripe and ready to drop at the slightest touch. They are then placed in the sun upon a flat tray made of willow, and allowed to remain until they shrivel. They are then put in an oven and cured slowly—a violent heat would cause them to burst and injure them. After remaining about 12 hours they are taken out and cooled, and put back again with a stronger heat. The time need not be so great. A third cooking is sometimes necessary. Each time they are taken from the oven they are cooled. When properly cooked they should have a bright, black look, as though they were varnished, and be elastic.

Suggestions to California Orchardists.

The cultivators of prunes in California can have this to reflect upon: They have in abundance the same variety from which the best prunes of Bordeaux or Agen are made, and so far as I know they have never produced anything worthy of the name of prune; that the whole superiority of the French prune is in the preserving, and in that art the Frenchman is skilled beyond all nations. It will be far better for them to experiment upon the French method than to waste their time upon the Alden or other American plans. I do not wish to be understood that the *Petite prune* is the only one that should be cultivated. I believe that the *Fallenberg*, and perhaps others, may be equally as good. I only saw common plums and the *Petite prune*. They are slow in introducing anything new here.

GRAFTING AND BUDDING.—In answer to a query last week, we made allusion to a new book on grafting and budding, published by Macmillan & Co. of New York City. We have been much interested in reading the book, and find much in it which will be of practical value both to the amateur and professional. It is a good translation from the French of Charles Baltet, and is entitled "The Art of Grafting and Budding." It undoubtedly presents the subject of grafting and budding in a more condensed and comprehensive form than any other book which has been written; and being done in English by Macmillan & Co., opens the wealth of French experience to those who cannot read the work in the original. It is a small book, fully illustrated, and costs, we believe, \$1.75. If it cannot be found at the book stores, we doubt not it can be had by mail, by addressing Macmillan & Co., New York City.

OHIO HORTICULTURE.—We have received from M. B. Bateman, Secretary, Painesville, Ohio, a copy of the pamphlet containing the

eleventh annual report of the Ohio State Horticultural Society. The report contains a valuable paper on horticulture, reviewed practically and esthetically. Mr. Bateman is one of our leading agricultural writers, and his report is a credit to him and the Ohio Society.

POULTRY YARD.

Poultry Notes.

From our foreign exchanges, chiefly from the *London Farmer*, we gather a group of facts and suggestions which are interesting and perhaps valuable:

It is often noticed that hens which lay astray and sit upon their eggs *al fresco* generally bring home far stronger and healthier broods than are turned out from the more elaborately contrived artificial nest. According to the *Praktischer Landwirth* this is simply and solely due to the fact that these latter are almost invariably kept too dry. The consequence is that the membrane or skin inside the shell of the eggs gets so "parchment-like" that the young chicks have not strength enough to break way through, and are smothered *in situ*. To obviate this many plans have been suggested, such as placing a fresh-cut turf at the bottom of the nest, or sprinkling the eggs with lukewarm water occasionally. But the best method of all is to imitate nature as closely as possible, and construct the sitting place simply of a little hay or straw laid upon a few shovelfuls of earth. In this manner the natural moisture of the earth will compensate for the gradual loss of it in the eggs undergoing incubation, and these latter will all be successfully hatched out, unless, of course, they were unimpregnated at the outset.

Our contemporary *L'Industrie Laitiere* records a recent incident which suggests the possibility of preserving eggs for a considerable time by an extremely simple method. Some eggs which had been "laid astray" last September by a hen on a farm near Arras, were accidentally covered in with earth to a depth of 15 centimeters, and thenceforth completely forgotten. Only a few days ago they were equally accidentally disinterred, and were then found to be as completely fresh as if only just laid, the bystanders unanimously declaring that they were fit for either eating or setting. It was, in fact, a case of preservation by "ensilage." Our contemporary suggests that the mild nature of the season may account for the slight distance of 15 centimeters below the surface proving sufficient to protect the eggs in this particular case, and recommends that in any experiments that may be made on the subject, the depth of interment should be regulated by the condition of the external temperature.

As an illustration of the profitable nature of poultry keeping under favorable circumstances, the *Journal du Cultivateur* gives us a few particulars of the trade carried on at Houdan, the village in the Seine-et-Oise Department, whence that well-known breed of fowls derive their name. Houdan alone sells 40,000 fat pullets a week, which, at the rate of 4.75, or five francs apiece, gives a weekly total of 160,000 francs, or in round numbers a yearly income of 42,000,000 francs. The communes of Goussainville, St. Lubin de la Haye, and Havelu have, between them, a trade with Paris exceeding 3,400,000 francs a year, of which 1,600,000 falls to the share of Goussainville, 1,400,000 to St. Lubin de la Haye, and 300,000 to Havelu.

Differences of opinion sometimes arise between hens and their owners on the all-important question of sitting, the bird desiring to brood while the master prefers that she should continue to lay eggs. Many are the wonderful plans adopted to reconcile such differences in favor of the master's view, but probably none is more curious than that described by Herr Volshaw in the *Allgemeine Hoffen-Zeitung* as having recently come under his notice in the neighborhood of Cuxhaven. This consists in tying a wisp of straw, about half the size of a wine bottle, upon the would-be brooder's back. Directly the hen feels this incumbrance she gets off the nest and runs wildly about the fields, striving in every way to free herself from it. After two or three days' useless struggles she resigns herself to her fate, and apparently makes up her mind to submit to the inevitable. The wisp of straw may then be removed, and it will be found that recent exertions have so changed the current of her thoughts that she thenceforth gives up all idea of sitting, and seeks consolation for her wounded feelings in diligently laying eggs.

In a Baden agricultural journal Prof. Nessler, of Carlsruhe, recommends a simple method of roughly determining the age of eggs. An old egg is well known to be lighter in weight than a fresh laid one, and as its size remains exactly the same, the difference must be due to diminished specific gravity. By dissolving 60 grammes of common salt in 500 grammes of water, we get a fluid of specific gravity 1.073, in which all new laid eggs will sink to the bottom, and all down-right stale ones float on the surface. The older the eggs are the less salt is required to render the solution capable of sustaining them, and when very old indeed they will float on simple water alone. The date at which they do this, varies considerably, the professor having observed it on the 70th, 63d, 53d, 40th, and 112th days respectively. Of course this test of age cannot be applied in the

case of eggs that have been kept in salt or in lime water, or that have been coated with varnish, oil, or liquid glass.

Houses for Fowl.

EDITORS PRESS: Hen houses in this climate should be made so that the fowl upon the roosts can get an abundance of fresh air. They need simply to be protected from rain and wind. The roof should be made tight, and one or two facing boards may extend below the roof and roosting poles. From near the roost to the ground strips or slats should be used to make walls of the building, with an inch or two of open space between for a free circulation of air. The doors should be so arranged as to give security against wild animals and owls, as well as other thieves. These should be closed at night with strict regularity.

Whitewash inside and out two or three times each season. The building need not be high, and the hens should be provided with steps to reach the roosts. The roost poles should be saturated with kerosene as a safe-guard against vermin. The nest boxes should be low down, easy of access, and movable and kept clean. Use sulphur and tobacco dust to keep away vermin. Moist earth and short straw will make good nests for eggs.

San Jose.

S. H. HERRING.

The State Survey on the Rivers.

The *Stockton Independent* says: Wm. Hammond Hall, State Engineer, and Edward Yorke, one of his assistants, were in the city on Saturday, and left yesterday morning by their steam launch. They have been on a tour of inspection of the various tide gauges, stationed at different points on the two rivers, and looking after the parties in the field. Both the parties out are making good progress, the topographical party, under Mr. Klugel, having about completed the survey from the mouth of the Stanislaus down Old and Middle rivers, and are now camped a short distance from Stockton, while the hydrographic party, under Mr. Boschke, are working down the Sacramento river, and are expected to reach Sacramento in about a month. After completing the meander of the San Joaquin river Mr. Klugel will go up the Sacramento, connecting his survey with Mr. Boschke's work, while the latter will come up the San Joaquin, connecting with the lines established by Mr. Klugel. The hydrographic work is being done very carefully, and soundings are taken the whole length of the river. The plan is to select stretches of the river of about a mile at frequent intervals, where a cross section characteristic of the stream may be found. A base line is then established on the bank, and a true meridian found from observations on the stars. From the base line, at intervals of 200 feet, lines are run across the river at right angles to the stream, and soundings carefully taken on these lines every 20 feet. From these soundings a section of 600 or 700 feet is selected where the stream is most nearly uniform, and at each of the sounding stations the electric current meters are lowered, and the velocity of the current measured at each five feet in depth. An average section will thus give a basis for calculation of the actual discharge of the river. At high water this operation will be repeated, and data obtained which will enable the engineers to calculate the amount of water which the river will carry at each point and at every stage of height, and thus to find out its defects and determine the best means to remedy them.

AMERICAN THRESHING MACHINES AT PARIS.

The American threshing machines on exhibition at Paris are splendid specimens of workmanship, and they fairly astonish the elegant Parisians. The *Echo Agricole*, of Paris, speaks of them in the following complimentary terms: To see these threshing machines, constructed with perfect taste as to shape, and with richness in the materials employed, true specimens of cabinet work and inlaying; these reapers and mowers, where all the metallic portions shine like silver, one does not imagine himself in the midst of apparatus destined for work which is reputed vulgar, such as cutting the wheat or mowing the grass, but in a store of enormous jewelry and among true works of art. Never, in any country, have been seen such grace and splendor. If by the magnificence of the machine we are to judge of the character of the workman, who would not be inclined to suppose the American farmer to be equally fine, walking the earth, not in blouse and wooden shoes, as with us, but in full dress and with hands gloved?

ECONOMICAL VALUE OF SOLAR HEAT.—In experimenting with his solar heating apparatus, Mouchot has found that the most satisfactory material for mirrors is either silver or brass, covered with a thin layer of silver by galvanizing. The variations of solar intensity in Algiers, between 8 A. M. and 4 P. M., are generally slight. The quantity of heat gathered on a square meter per minute varies from 6 to 9.8 calories. A supply of seven calories enables a reflector of a meter square to boil in less than 12 minutes a liter of water at 20°, and produces hourly 778 grams or 1,322 liters of steam at the normal pressure. These results are only two-thirds as great as he anticipates from larger receivers. He proposes soon to present to the academy a description of his great receiver of 25 square meters, which is to be placed in the Universal Exposition.

The Old Time Millwrights.

An English writer of a book on mechanical progress pays the following passing tribute to the old millwrights, whose distinctive occupation like Othello's, has now well nigh gone. It was very truly remarked that the millwright of former days was to a great extent the sole representative of the mechanical art, and was looked upon as the authority in all the applications of wind and water, under whatever conditions they were to be used, as a motive power for the purposes of manufacture. He was the engineer of the district in which he lived—a kind of jack-of-all-trades—who could with equal facility work at the lathe, the anvil, or the carpenter's bench. In country districts far removed from towns he had to exercise all these professions, and he thus gained the character of an ingenious, roving, rollicking hlade, able to turn his hand to anything. He wandered from mill to mill in search of work, and was everywhere recognized as an itinerant engineer and mechanic of high reputation. He could handle the axe, the hammer, and the plane with equal skill and precision. He could turn, bore, or forge with the ease and dispatch of one brought up to these trades, and he could set out and cut in the furrows of a millstone with an accuracy equal or superior to that of the miller himself. These various duties he was called upon to exercise, and seldom in vain, as in the practice of his profession he had mainly to depend upon his own resources. Generally he was a fair arithmetician, knew something of geometry, levelling, and mensuration, and in some cases possessed a very competent knowledge of practical mathematics. He could calculate the velocities, strength, and power of machines, could draw in plan and section, and could construct buildings, conduits, and water-courses in all the forms and under all the conditions required in his professional practice.

The introduction of the steam-engine, and the rapidity with which it created new trades, proved a heavy blow to the distinctive position of the millwright, by bringing into the field a new class of competitors in the shape of turners, fitters, machine makers, and mechanical engineers; and, notwithstanding the immense extension of the demand for millwork, and the great stimulus which it afforded to the manufactures of the country, it nevertheless lowered the position of the millwright, and levelled it in a great degree with that of the ordinary mechanic.

DEPTHS OF LAKES.—The *Bavarian Courier* publishes an interesting comparative statement of the depth of lakes. Among European lakes the Achensee, in the Tyrol, heads the list. At some points the depth of this lake amounts to 2,500 feet. The greatest depth of the lake of Constance is about 975 feet, that of the Chiemsee about 458 feet, and that of the Walchen and Königssee, 611 feet. The measurements made about 1870 at the Dead Sea showed that at its deepest part its depth is 1,836 feet, but if we consider that the level of this lake is already 1,394 feet below the level of the Mediterranean, then we find that the total depression in the soil here amounts really to 3,230 feet. The lake of Tiberias is extremely shallow in comparison; on its eastern part the average depth is only 26 feet while on the western side it lies between 19 and 22 feet. In lake Baikal depths have been found which for a lake are utterly astonishing. In the upper part of the lake the depth is 10,800 feet, (about the height of Mount Etna) but downward the bottom constantly descends, and near the opposite bank the depth amounts to 13,230 feet. The depth far exceeds that of the Mediterranean Sea, which at its greatest part measures only 7,800.

LABOR STATISTICS.—The facts which have been compiled by the Massachusetts Bureau of Statistics to show the condition of labor in that State, furnish, says the *N. Y. Tribune*, a good answer to its demagogues, domestic and imported. The Bureau found 21,000 laborers out of employment on the 1st of June, of whom nearly two-thirds were unskilled laborers. This number, it is believed, would have been greatly reduced if the enumeration had been made at a busier manufacturing season, though there is compensation in the fact that it was made when many persons had temporary employment on farms. Admitting this figure to be larger than it is well to have it, the report still declares that there have been fewer demands for charitable relief, throughout the State, as shown by indisputable evidence, than for several years back; and the general testimony of officials is that many of those who are without work would not take it if they could get it. Taking this result as a basis, the whole number of persons out of employment in the United States is estimated at 570,000, or less than 6% of the aggregate of persons occupied in what are called productive industries. This is a formidable showing, and yet it is scarcely one-sixth the size of the figure that the tramp statesmen have been imposing upon their audiences.

RESTORING FADED WRITING.—Manuscripts which have been illegible may be restored by Von Bibra's process of developing faded ink. A solution of tannin is applied with a brush, the excess is removed by a current of water, and the document is dried at a temperature of from 144° to 177°. The solution of tannin should be moderately concentrated. It does not possess the destructive influence upon the paper which is produced by hydrosulphate of ammonia. The writing developed in this manner remains clear and black for several months.

The Golden Gate Fair.

The counties of San Francisco, Alameda and Contra Costa, having united under the title of the "Golden Gate District Agricultural Association," gave their first fair at Oakland, last week. The exhibition opened on Monday and closed on Saturday. The show of stock and agricultural implements took place at the fair grounds and race track near Shell Mound park, while the exhibit of fruits, vegetables, manufactures, mechanic and fine arts, took place at a spacious pavilion at the corner of Harrison and Tenth streets, which has recently been erected by the association as a permanent place for its annual exhibitions.

Magnificent Display of Stock.

The display of stock was very fine and full. The first parade was given on Tuesday, the second day of the exhibition, and was one which would do credit to any association. The procession extended quite around the track, and was a most interesting spectacle to behold. The horned stock comprised large numbers of the best specimens of the several breeds. It was extraordinarily fine in Short Horns, Ayrshires, Jerseys and Holsteins. Col. Younger exhibited 20 head, with "Red Thorndale" at the lead. Peter Coatts, of Mayfield, exhibited 22 Ayrshires, and one Holstein bull. The other exhibitors were Jesse Carr, George Bement, William Stone, Robert Ashburner, Chas. Clark, J. B. Watson, Grant I. Taggart, M. Week, Jones & Hogen and A. Agnall.

All the leading stables in the State had their representatives on the ground, and the speed contests, particularly the last one on Saturday afternoon, was one of the most remarkable ever seen, inasmuch as the victor, "Col. Lewis," made the best time ever accomplished by a trotter in his first season—2.18 3/4.

The display of sheep was particularly fine. Strowbridge had 40 head of Spanish merinos, Geo. McCracken, of San Jose, had 40 head of thoroughbred graded sheep, among which were five pens of Cotswolds. One buck and five lambs in his exhibit weighed 1,000 pounds. Mendenhall & Severance had on exhibition a number of Angora goats of extra fine breed.

The display of pigs and poultry was not what it might and should have been, although it was quite creditable to a society making its first exhibit. The interest in the show and the stock grounds continued to increase day by day up to the close. The attendance on Saturday was very large, and was estimated by good judges at from 12,000 to 15,000 people.

At the Pavilion

The display was very fine and tastefully arranged. This portion of the exhibition is to continue through the present week. The main hall is tastefully decorated with bunting, a handsome fountain occupying the center area. Whittier, Fuller & Co. make a fine exhibit of paints, oils, brushes, etc.; Gladding & Bean, the Pacific Pottery Co., and the California Pottery Co., have a large display of drain and water pipes, jars, jugs, etc.; W. W. Montague & Co.'s exhibit occupies more space than that of any other exhibitor, and is a really fine display of stoves and tinware, and kitchen utensils. Messrs. Still & Manley make a very fine exhibit of inks, mucilage, blacking, etc., all of which is of their own manufacture, and from a new establishment recently started in Oakland.

Mr. J. Green, of 22d street, Oakland, exhibits a case of assorted ribbons manufactured by him, equal or superior in quality to the best imported.

The floral exhibit is massed in the center of a large canvas annex. It is made by Kelsey & Co., and is the finest and most extensive ever made in the State by any one firm. Had they not been greatly crowded for space, the exhibit would have been much larger and more tastefully displayed.

The Fruit Exhibit

Is arranged on the opposite sides of the canvas annex, and is the largest and most complete ever presented in California. It comprises fruit of nearly every variety of both temperate and tropical growth, all raised in California and within three degrees of latitude—180 miles—Los Angeles being the extreme southern point from which the exhibit has been collected, and Sonoma its northern limit. There is probably no other spot on the earth of the same limited extent from which so great a variety of superior pomological productions could be collected. Among the exhibitors we notice Dr. Strentzel

of Martinez, with 23 varieties of grapes, six of pears, six of apples, also oranges, lemons, almonds, wine, etc.

D. C. Young, of Sonoma, makes a very large display, among which may be enumerated 120 varieties of apples, 85 of pears, 18 of peaches, 45 of grapes, etc.; also oranges and lemons from his orchard in Sonoma. He also makes a fine exhibit of tropical fruits from Woodhill & Gay, of Los Angeles, among which were 12 varieties of oranges, two of limes and three of lemons, one of which latter is known as the Eureka sweet rind, very fine and large; also several bunches of bananas. Banana blossoms and banana trees were also shown.

Morris Bros., of Sonoma, exhibit 42 varieties of grapes, 10 of apples, 10 of pears, 5 of peaches, also oranges and very superior sun-dried raisins of his own production. These gentlemen also exhibit 29 varieties of vegetables, in addition to melons.

Mitchell Guillian, of Sonoma county, makes a fine display of seedling fruit, consisting of apples, peaches, plums, pears and quinces, among the latter were some weighing two pounds.

Among other exhibitors of fruit we noticed Mrs. S. H. Parsons, of Oakland; Robt. Blacow, of Centerville, who exhibited a lot of oranges, lemons, etc., of his own raising.

The Contra Costa Produce Co. made a very fine exhibit. The exhibitors under this name were five in number—Dr. Strentzel, already mentioned, also Henry Raap, W. C. Stone, Nathaniel Jones and Mrs. J. Slitz, all of whom contributed liberally to the general aggregate.

Mr. James Stratton is there showing the products, statistics, etc., of the Washington colony of Kern county, and doing much to call attention to that portion of the State, and to the advantages of co-operative colonization.

The fair may be pronounced a most decided success. The attendance we are informed has been larger than was anticipated, and the entries and exhibits beyond expectation. The Golden Gate fair thus takes rank from the start with the great agricultural exhibitions of the country, and will no doubt at its future exhibits attract visitors and exhibitors from all sections of the State. The association seems to have been fortunate in the selection of its management, which, for the first exhibit, has certainly given most unqualified satisfaction in every department.

Premiums Awarded at Golden Gate Fair.

Horses.
Thoroughbred Horses.—Stallion, 4 yrs and over, to H. C. Judson, for Wildfire; best stallion, 2 yrs and over, to James W. Chase, for Warwick; 1 yr old to H. C. Judson, for Contra Costa; suckling colt (stallion), to R. P. Clement, for Thad Dudley; Mare, 4 yrs old and over, with colt, to James Mee, for Katy Pease and foal by Wildfire; 4 yrs old and over, to J. C. Simpson, for Lady Amanda; thoroughbred mare to James Mee, for Folly; best 1 yr old, to H. C. Judson, for Ella Doane; best suckling, to James Mee, for Minnie; best thoroughbred dam with 2 colts, to William Boots, for Miami. Stallion other than thoroughbred, to Tennent of Contra Costa (dip), for Pinole Patchen. Stallions other than thoroughbreds, with 5 of his colts, to H. A. Mayhew, for Billy Hayward and colts; best mare and 2 colts other than thoroughbred, to F. O. Fuller, for Nellie and colts.

Graded Horses.—Best graded stallion, 4 yrs and over, to L. H. Titus, for Echo; 3-yr-olds other than thoroughbred, to Otis Hill, for Early Pearl. Graded 2-yr-old, Captain, owned by P. Martin. One-yr-old, Success, owned by Eaton & Harris. Suckling graded stallion, Perfection, owned by Ben E. Harris. Graded mare, 4 yrs old, with colt, Lady St. Clair, owned by Duncan Cameron. Two yrs old and over, Lena, owned by Wm. Hendrickson. Roadsters.—Roadster stallion, 3 yrs old and over, Sultan, owned by J. Ross, of Los Angeles; 2 yrs and over, Bullion, owned by R. P. Clement; gelding, 4 yrs and over, to Red Cross, owned by McCord & Malone; mare, 4 yrs old and over, Nellie Patchen, owned by George M. Misner; mare, 3 yrs old and over, Medora, owned by Wm. Johnson, and a special prem to Jennie G., in the same class with Medora; 2 yrs old and over, Agnes, owned by Charles H. Cushing, of San Leandro. Double teams, best roadster team, to Johnny and Jack, owned by W. H. Allen, of San Francisco. Best yearling horse colt, to M. Mendenhall, for Selim. Sweepstakes, sucking roadster colt, to H. A. Mayhew, for Poscora Drew; yearling mare colt, to Sahin A. Harris, for Minnie Harris; sucking mare colt, to F. O. Fuller, for Carrie Tull; yearling mare colt Sallie Hall, F. O. Fuller, favorably mentioned.

Other Awards.—Sweepstakes stallion, L. H. Titus, of Los Angeles, for Katie Pease; 2d, William Boots, for Miami. Best Jack, R. P. Saxe, of San Francisco, for Smuggler. Best span of mules, William McDonald, of Contra Costa, for Jack and Dolly. Committee on Horses have recommended a silver cup to Shetland ponies owned by sons of Grant I. Taggart, for Barney, Topsey, and Betsy. Draft stallion of any age, Paris Boy, owned by Wm. Shuey, of Contra Costa. Draft mare with colt, W. A. Watts, for Maggie. Best exhibit of not less than 6 colts, owned by one person, to Ben E. Harris, of San Francisco, for Excellence, Juggler, Success, Lady Lennon, Belle Thompson, Digit, and Perfection. Best stallion of all work, 4 yrs old and over, H. A. Mayhew, for Alonzo; 1 yr old, for Black Prince, owned by John Pfau. Mares of all work with colt, Ben E. Harris, for Bell Brown; mare without colt, 4 yrs old, for Kate Patchen; mare, 3 yrs old, to M. A. Fernandez; 1 yr old, Patchen Maid, owned by Dr. Lennard.

Cattle.

Short Horns.—Bull, 4 yrs old and over, C. B. Hensley, of San Jose, for Mason Duke; 2d, Col. Younger, of San Jose, for Red Thorndale. Three-yr-old and over, Col. Younger, of San Jose, for Airline Thorndale; 2d, M. Wick, of Oroville, for Golden Louan Duke. Two-yr-old and over, to Jesse D. Carr, for Sixth Duke of Gabilan; 2d, Jones & Haggin, for Oxford Duke. Yearling, to M. Wick, for Major Butler; 2d, Jesse D. Carr, for Maynard. Bull

calf, to Jesse D. Carr, for Thirteenth Duke of Gabilan; 2d, Col. Younger, for Thorndale. Durham cow, 4 yrs old and over, to M. Wick, of Oroville, for Gem; 2d, to Wm. Quinn, for Fuschia. Best Durham cow and calf, to Col. Younger, for Rosa Nell. Cow and calf, 3 yrs old, to Jones & Haggin, for First Louan of Avenue Ranch; 2d, Col. Younger, for First Rosa Nell. Two-yr-old and over, Col. Younger, for Dolly Thorndale; 2d, to M. Wick, for Venus First. One yr old, to M. Wick, for Frantic Louan; 2d, Jones & Haggin, for Jesse Maynard. Heifer calf, to Col. Younger, for Maid of Malvern; 2d, Jones & Haggin, for Lady Marthel.

Alderney and Jersey Cattle.—Bull, 4 yrs old and over, to James McM. Shafter, for Marin, for Surprise; 2d, W. B. Clement, for Monarch; 3 yrs old and over, W. L. Stone, for Joe Bowers; 2 yrs and over, Grant I. Taggart, for Joe; 2d, W. B. Clement, for Woodrat; 1 yr old, Captain Burns, for Glory; cow, 4 yrs and over, Grant I. Taggart, for Ruby; 2d, W. B. Clement, for Young Daisy; 3 yrs, J. McM. Shafter, for Lady Blanche; 2d, A. J. Snyder, for Lizzie; 2 yrs old, James McM. Shafter, for Olivia; 2d, A. J. Snyder, for Fanny; 1 yr old, Grant I. Taggart, for Vane; 2d, J. S. Emery, for Daisy; heifer calf, to W. B. Clement, for Ayshire Cattle.—Bull, 3 yrs and over, to Peter Coutts, for Scarboro Chief; 2d, Geo. Bennett, for Melancthon; 2 yrs old, Peter Coutts, for Adonis; bull calf, Peter Coutts, for Snow Boy; cow and calf, Peter Coutts, for Maggie Douglass; 3 yrs old, Peter Coutts, for Floy Douglass; 2 yrs old, Peter Coutts, for Edith Brown; 1 yr old, Peter Coutts, for Lady Chapin; heifer calf, Peter Coutts, for Fama.

Sweepstakes, Families.—Herd thoroughbred cattle, prem to Col. Younger, for Red Thorndale and family; 2d, M. Wick, for Golden Louan, Duke and family. Thoroughbred cattle under 2 yrs, to M. Wick, for May Butler and family; 2d, Jones & Haggin, for Jesse Maynard and family.

Graded Cattle.—Graded cow, 4 yrs old and over, Robert Ashburner, for Dew Drop. Best 3 yrs old, to Jesse Agnew, for Fanny Forester; 2d, to Robert Ashburner, for Wallflower; 2 yrs old, Robert Ashburner, for Pomona; yearling, Jesse Agnew, for Irene; 2d, Robert Ashburner, for Myra.

Sweepstakes.—Best bull of any age or breed, to Col. Younger for Red Thorndale; 2d, Jesse D. Carr, for 6th Duke of Gabilan. Best cow of any age or breed, to Jesse D. Carr, for Pet of Geneva; 2d, Col. Younger, for Rosa Nell. Best bull and three of his calves under 1 yr old, to Mr. Wick, for Golden Louan Duke; 2d, Jones & Haggin, for Master Maynard.

Sheep.

George McCracken, best ram, 2 yrs old, Silver Fleece, Cotswold; George McCracken, second best, 2 yrs old, Golden Fleece, Cotswold; R. P. Saxe, best ram 2 yrs old, Adam Watson, Shropshire; George Bement, best ram, 2 yrs old, Billy Button, Southdown; J. H. Strowbridge, best ram, 2 yrs old, California, Spanish Merino; J. D. Carr, second best ram, 2 yrs old, Gabilan, Spanish Merino; J. D. Carr, second best ram, 2 yrs old, Modoe, Southdown; George McCracken, best ram 1 yr and under, San Jose, Cotswold; R. P. Saxe, second best ram, 1 yr and under, Chips, Spanish Merino; R. P. Saxe, best ram 1 yr and under, Captain Snow, Shropshire; George Bement, best ram, 1 yr and under, Tommy Shamp, Southdown; J. H. Strowbridge, best ram 1 yr and under, Durve; George McCracken, best three ram lambs (Cotswold); George McCracken, second best three ram lambs (Cotswold); George Bement, best three ram lambs (Southdown); J. H. Strowbridge, best three ram lambs (Merino); J. H. Strowbridge, second best three ram lambs (Merino); George McCracken, best pen 5 ewes, 2 yrs and over (Cotswold); George Bement, best pen 5 ewes, 2 yrs and over (Southdown); J. H. Strowbridge, best pen 5 ewes, 2 yrs and over (Spanish Merino); J. D. Carr, second best pen 5 ewes, 2 yrs and over (Spanish Merino); George McCracken, best pen 5 ewes 1 yr and under 2 (Cotswold); J. H. Strowbridge, best pen 5 ewes, 1 yr and under 2 (Imported Spanish Merinos); J. D. Carr, second best pen 5 ewes 1 yr and under 2 (Imported Spanish Merino); George McCracken, best pen 5 ewe lambs (Cotswold); George Bement, best pen 5 ewe lambs (Southdown); J. H. Strowbridge, best pen 5 ewe lambs (Imported Spanish Merino); J. D. Carr, second best pen 5 ewe lambs (Southdown); George McCracken, best ram and 5 of his lambs (Imported Cotswold); George McCracken, second best ram and 5 of his lambs (Imported Cotswold); George Bement, best ram and 5 of his lambs (Imported Spanish Merino); J. D. Carr, second best and 5 of his lambs (Imported Spanish Merino); J. D. Carr, second best ram and 5 of his lambs (Southdown). Cross between thoroughbreds and other breeds of sheep, graded, George McCracken, best pen of 5 ewes, 2 yrs old and over; George McCracken, best pen 5 ewes, 1 yr old and under 2. Cross between any two thoroughbreds, R. P. Saxe, San Francisco, Harry Underwood; George McCracken, San Jose, best 5 ewe lambs. Sweepstakes—J. H. Strowbridge, best ram of any age or breed and 5 of his lambs, California, Spanish Merino. George McCracken, second best ram of any age or breed and 5 of his lambs, Silver Fleece, imported Cotswold.

Goats.

Wm. M. Mendenhall, eight premiums for bucks and does of different ages and sweepstakes.

Swine.

J. B. Watson, best boar 2 yrs old, Duke; Josiah Sessions, best boar six months, Berkshire; J. B. Watson, best breeding sow, Betsy; Josiah Sessions, pigs under 10 months, Berkshire; Josiah Sessions, best sweepstakes boar, Berkshire; Josiah Sessions, best sweepstakes sow, Berkshire.

Poultry and Rabbits.

Morris Bros., Sonoma, 15 premiums for different breeds of fowls, ducks, geese and turkeys. Other premiums were as follows: Best trio Plymouth Rock fowls, Grant I. Taggart, Oakland. Best trio white Leghorn fowls, Geo. Bennett, Napa county. Best trio Leghorn fowls, Grant I. Taggart, Oakland. Best trio golden-spangled Polish fowls, Grant I. Taggart, Oakland. Rabbits—Allen Mayhew, East Oakland, best pair Angora rabbits; Allen Mayhew, East Oakland, best and largest exhibit of rabbits by one person.

MAMMOTH PEACHES.—We have been shown, during the past week, some peaches from the ranch of Claus Gerckens, at Knight's Ferry, Stanislaus Co., of the royal dimensions of 10 1/2 by 11 inches. This is about as fine looking fruit as we often get sight of, even in California. And these samples, we are told, were not closely selected, most of the peaches grown on that ranch showing the truly Falstaffian girth of about 11 inches. Mr. Gerckens sends much fruit to San Francisco every summer, where it meets with ready sale at extreme prices because of its great size and excellence. The season of live fruit extends here over a range of many months, the products of this ranch coming into market early and continuing late.

A FRIGHTFUL colliery explosion occurred Sept. 11th, at Abercarne, near Newport, Monmouthshire. There were 371 men in the pit. The number of deaths has been estimated at 280.

PANTHERS have troubled sheep and cattle in Humboldt county.

S. F. MARKET REPORT.

Note.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, September 18th, 1878.

Trade is quiet and with better change in prices. Loading ships is proceeding evenly, and shippers having both ships and Grain enough for present handling, the trade is resting for a few days.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday....	10s	@10s	3d	10s	4d@10s	6d
Friday.....	10s	@10s	3d	10s	4d@10s	6d
Saturday....	10s	@10s	3d	10s	4d@10s	6d
Monday.....	10s	@10s	3d	10s	4d@10s	6d
Tuesday....	10s	@10s	2d	10s	3d@10s	5d
Wednesday..	10s	@10s	2d	10s	3d@10s	5d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.		Club.	
1876.....	9s	8d@9s 11d	9s	11d@10s 1d
1877.....	12s	8d@13s	12s	11d@13s 3d
1878.....	10s	@10s 2d	10s	3d@10s 5d

The Foreign Review.

LONDON, Sept. 17th.—The *Mark Lane Express* says: The fine weather continued the last week, and the harvest of the kingdom is pretty well finished under the most favorable circumstances. Such a fine ending is of inestimable value, though a great deal of Wheat and a larger quantity of Barley was irretrievably damaged by the wet weather that immediately preceded the fine period. At our market an inactive demand for wheat prevailed, and although supplies up to Friday were not heavy, millers could not be induced to buy unless under important concessions. The most noteworthy feature of the movement in foreign Wheat still exists in the large continental demand. The samples of Barley are mostly discolored, but good malting qualities are readily taken. This grain, like wheat, is finding great variations in values. Business in Maize and Oats took place to the extent of consumption requirements, without any speculative demand.

Freights and Charters.

The *Call* says: The freight market remains in statu quo. Exporters are supplied with tonnage for immediate wants. Rates entirely nominal at 40@45s to Great Britain. There are now in port 50,395 tons shipping engaged for Wheat, 59,688, disengaged and 6,755 tons loading General Merchandise. On the way to this port, so far as known, 155,000 tons.

Eastern Grain Markets.

NEW YORK, Sept. 14th.—Early in the week there was a speculative advance in Wheat, but subsequent large receipts and the depressed and temporarily overburdened condition of the foreign markets led to a reaction, and the demand for France has temporarily subsided, and the demand from other parts of the continent and Great Britain has been light, thus causing a further decline in freights, English steamers having accepted 5 1/4d, while for British outlets and the continent rates are 5s. @5s. 9d. Speculative charters to arrive along back have turned out disastrously, as is apt to be the case with such business. Red Winter Wheat closes at 97c@1 08; White, 1 10c@1 16, and new No. 2 Spring, for October, 1 10c@1 03.

CHICAGO, Sept. 14th.—During the past week the Wheat market has been generally lower, but not very exciting; and yet there has been a fair speculative business and a good healthy movement. It closes rather easy and weak. Sales for October, 85 1/2@89 1/2. Corn was in a fair demand, averaging a shade lower in price than last week. Sales for October, 27 1/2@38 1/2. Oats are very quiet and steady, with October selling at 21 1/2@21 3/4. Rye was steady at 65c. for cash. Barley was irregular and fluctuating between 1 04@1 11 1/2 for October. Provisions were unsettled, and the most active of all the markets, but the trade was not of a healthy sort except in one or two days' sales. Pork for October, 87 1/2@88 1/2. Lard, 56 1/2@56 3/4. Whisky steady at 87. Closing cash prices: Wheat, 86 1/2@86 3/4; Corn, 36 1/2; Oats, 20 1/2@20 3/4; Rye, 45; Barley, 51 06; Pork, 88 60; Lard, 56 77 1/2.

Eastern Wool Markets.

NEW YORK, Sept. 14th.—The Wool market has continued to show the firmness noticed this day week, dealers having settled down to a conclusion that the supply of medium grades is gradually becoming less, and that but a short time will elapse when manufacturers will turn their attention to fine grades. This, coupled with the fact that current rates for fleeces do not any more than cover costs, laid down, has materially assisted to promote a stronger feeling than is now manifest. Texas and California still hold their own, prices being maintained with considerable confidence. New Fall California arrives very slowly, and its condition is generally poor. Fall Texas is also arriving, but as yet no sales are reported. The Oregon to hand has met with fair sale, but the prices obtained, though not up to expectation, have been fairly satisfactory. Carpet Wools are dull and weak. Sales for the week are: 100 bales Don-

skoi, at about 23c.; 45,000 lbs Spring California 22@28c.; 25,000 lbs Fall do, 12½@17c.; 42,000 lbs Eastern Texas, low to choice, 15@26c.; 37 bags scoured do, 48c.; 70,000 lbs Western Texas, 15@20c.; 600,000 lbs Oregon, 23@28c.

Boston, Sept. 14th.—Wool is quite steady, with a fair average business. There is no pressure on the part of holders to force sales, and buyers appear indifferent about purchasing. Pulled Wools are in fair demand, and remain unchanged. There is considerable doing in unwashed and unmerchanted fleeces, Territory and other low-priced Wools. California is in fair demand, sales comprising 290,000 lbs., at 17@28c. for Spring, and 17½@18c. for Fall.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Aug. 23.	WEEK. Sept. 4.	WEEK. Sept. 11.	WEEK. Sept. 18.
Flour, quartersacks..	49,131	45,92	67,152	75,841
Wheat, cents.....	393,016	440,053	572,818	533,024
Barley, cents.....	44,631	61,355	48,962	71,424
Beans, sacks.....	437	1,832	1,149	2,106
Corn, cents.....	2,094	682	1,999	2,410
Oats, cents.....	3,462	5,739	2,352	7,415
Potatoes, sacks.....	8,859	10,741	10,683	11,845
Onions, sacks.....	991	1,207	1,011	890
Wool, bales.....	1,156	4,268	2,379	4,554
Hops, bales.....	45	191	485	618
Hay, bales.....	2,835	2,348	1,946	1,787

BAGS—The ring still holds, and there is no change in rates for Grain Bags. Bean Bags are advanced a little, 8c. being now the price for anything passable.

BARLEY—Barley rules between former limits. We note sales: 1,300 bags Bay Brewing at \$1.20; 350 heavy Coast Feed at \$1.02½; 450 Common Bay at 1; 400 Choice Coast at \$1; 185 Dark Coast at 90 c. ½ ctl. A lot of 400 bags Old Brewing sold at \$1.40 ½ ctl.

BEANS—Receipts of new beans are increasing. Bayos, red and pink, are most free arrivals, and prices rule lower than for pea and small white.

CORN—White and small round Yellow now constitute the supplies, and prices are a little lower than last week.

DAIRY PRODUCE—The only change is an advance of 2½c. per lb on the fancy brands.

EGGS—Eggs are doing 6c. better for the freshest. Duck Eggs have advanced 7½c. per doz.

FEED—Prices are unchanged. We note Hay sales: Cargo sales at \$7.50 for Stock, \$8@9 for Stable, and \$10.50 for Wheat and Oat mixed.

FRESH MEATS—Fresh Meats are abundant. Beef is a little lower; Mutton is feeling a trifle better. Hogs are weak from large arrivals.

FRUIT—A few changes in prices may be seen in our table below.

HOPS—The best price we have heard of is on a sale of choice Mendocino Hops at 17½c. gold. The price usually aimed at is 15c., but the trade has not opened generally. A dispatch from New York says: "New crop Hops is arriving slowly, and sales of small parcels are being made at 12@15c."

OATS—Oats have been firm and sold at full prices. We note sales of 106 bags choice California, \$1.57½; 175, 160 and 150 good do at \$1.55; and 100 inferior at \$1.17½.

ONIONS—All good sorts are now worth \$1.12½@1.15 per ctl.

POULTRY AND GAME—Quail are abundant and sell at \$1 per dozen.

PROVISIONS—Meat products are firm at quotations, with an increased consumptive demand. Eastern Hams are high and reliable brands same.

VEGETABLES—There are a few changes noted in our list.

WHEAT—Liverpool prices have shaded off a little. Quotations here have not changed materially because holders are firm. Transactions are considerably reduced. We note sales of 300 choice Milling at \$1.75; 490 fair Milling at \$1.71½; 270 do, \$1.70; 2,000, 400, 600, 1,000, 1,800 and 2,000 good Shipping at \$1.70; 3,000 ctls at \$1.55@1.71½; 850 pinched at \$1.62½; 200 superfine at \$1.55; 350 poor Walla Walla at \$1.55; 300 superfine at \$1.50; 100 do at \$1.52½ per ctl.

WOOL—The trade is opening very slowly, and we are not able yet to give reliable general rates for Fall Wool. Some idea can be gained, however, by the following sales of 70,000 California Southern Fall, 11c@12½; 13,000 do Northern do, 14½c; 80,000 Oregon Spring, Eastern and Valley, 17c@22; 4,000 lbs Nevada Spring, 22c.

RETAIL GROCERIES, ETC.

WEDNESDAY, M., September 18, 1878.	
Butter, California	25 @ 35
Cholce, lb.....	18 @ 25
Cheese.....	25 @ 30
Eastern.....	18 @ 25
Lard, Cal.....	20 @ 25
Eastern.....	20 @ 25
Flour, ex fam, hbls	20 @ 25
Corn Meal, lb.....	2 ½ @ 3
Sugar, wh. crabd	12 @ 13 ½
Light Brown.....	8 @ 9 ½
Coffee, Green.....	23 @ 35
Tea, Fine Black.....	50 @ 61 00
Finest Japan.....	55 @ 61 00
Candles, Adm'te.....	15 @ 25
Soap, Cal.....	7 @ 10
Rice.....	8 @ 12
Yeast Pwdr, doz.....	1 50 @ 2 00
Can'd Oysters doz.....	40 @ 50
Syrup, S F Gold'n.....	75 @ 102
Dried Apples, lb.....	10 @ 14
Ger. Prunes.....	12 @ 10
Figs, Cal.....	9 @ 15
Peaches.....	11 @ 10
Oils, Kerosene.....	50 @ 60
Wines, Old Port.....	3 50 @ 5 00
French Claret.....	1 00 @ 2 50
Cal. doz hot.....	3 00 @ 4 50
Whisky, O K, gal.....	3 50 @ 6 00
French Brandy.....	4 00 @ 9 00

Gold, Legal Tenders, Exchange, Etc

[Corrected Weekly by SUTRO & Co.]
SAN FRANCISCO, September 18, 3 P. M.
LEGAL TENDERS IN S. F., 11 A. M., 99½@99.90. SILVER, 1½@ 2. GOLD IN NEW YORK, 100½.
GOLD BARS, 890@910. SILVER BARS, 8@15 ½ cent. dis count.
EXCHANGE on New York, 4½; on London bankers, 49@ 49½. Commercial, 50; Paris, 5 francs 90; dollar; Mexican dollars, 83@81.
LONDON CONSOLS, 94 13-16; Bonds, 108½.
QUICKSILVER IN S. F., by the flask, ½ lb, 41½@42c.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

PERMUTATION LOCKS.—Stephen A. Mann, Reno, Nev.
MACHINE GUNS.—Harvey R. Leonard, San Francisco, California.

The California Sack Holder.

Among the many new inventions and labor-saving contrivances that have been introduced to the public, there is none that recommends itself so fully and readily as the California sack holder. By its use the labor of one man is saved, and the sacking of grain instead of being the tiresome "back-breaking" work as heretofore, becomes light and agreeable. In fact a boy can operate it as well as a man. The sackholder, like most of the more useful inventions, is very simple in its construction, and it is next to impossible to get it out of order. Its light, weighing but about 17 pounds, and will last though constantly used for years. It is adjustable to any sized sack, and allows no wastage whatever. We consider that it is one of the most useful California inventions we have seen. The patentees deserve to realize the handsome profit we predict for them, and we feel warranted in making the prediction from the large number of people who nightly examine its practical workings at the Mechanics' Pavilion, and the great number of orders the agents are receiving.

WANTED, by a middle-aged woman of education, a position in a respectable farmer's family. Would make herself useful. Salary small. References. Address, INDUSTRY, office RURAL PRESS.

SETTLERS and others wishing good farming lands for sure crops, are referred to Mr. Edward Frisbie, of Anderson, Shasta County, Cal., who has some 15,000 acres for sale in the Upper Sacramento valley. His advertisement appears from time to time in this paper.

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24 Post Street.
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The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

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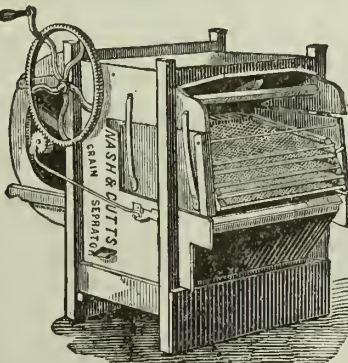
TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, E. P. HEALD, President Business College, San Francisco, Cal.

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THREE SIZES—Warranted to Clean from 60 to 200 bushels per hour, perfectly.

PRICES—No. 1, \$35; No. 2, \$45; No. 3, \$62.

The Nash & Cutts' Machine is the only machine that has taken the First Premium at California State Fairs in 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877.

Nash & Cutts' Machine will thoroughly separate Mustard Seed, Cheat, Barley, Oats, Cracked Wheat, etc., from Wheat in a rapid and satisfactory manner.

No zinc sieves used in the Nash & Cutts' Grain Separator and Fan Mill; therefore we can

Clean Faster, Better, and with Less Work and Trouble,

Than any other machine now in use.

The Nash & Cutts' Machine is the only one that will clean Alfalfa Seed. All we ask of any one in want of a Grain Separator is to give the Nash & Cutts' a trial.

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PATENT

SQUIRREL

AND

GOPHER

Exterminator!!

The valuable nature of this article has tempted several inexperienced, ignorant or unscrupulous persons to force similar appearing, but very inferior, preparations on the market, which being confounded in the minds of some with this poison, has a tendency to bring it into disrepute. H. P. WAKELEE & CO. were the first to prepare poisoned grain for this purpose so that it would retain the effects for a great length of time without spoiling, and obtained U. S. Letters Patent for that only; but the POISONOUS COMPOUND is prepared by a SECRET FORMULA and has NEVER BEEN SUCCESSFULLY IMITATED. Suit has or will be commenced against all infringements.

The public are warned against attempts which seem to be made to gain a false reputation for imitations by manufacturers putting out their own poison and apparently producing astonishing results. That their operations were a system of jugglery may be proven by any farmer putting out the two poisons on the same day. One pound of WAKELEE'S will kill as much as from eight to fifteen pounds of the imitation, care being used to purchase both articles from an uninterested dealer.

Great Reduction has been made in Price of 5-pound Tins and in bulk, 65-pound Cases.

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R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

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L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

GEORGE MCCracken, San Jose, Cal. Pure blooded Cotswold Sheep for sale.

POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importers and Breeders of Thoroughbred Poultry. Eggs for hatching.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

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ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

W. & J. ROBINSON, Hanford, Tulare Co., Cal., Importers and Breeders of Thoroughbred Berkshire Swine and Pure Brown Leghorn Fowls. Scotch Colley (Shepherd) Pups for sale. Imported percentage on both sides.

A. J. TWOGOOD, Riverside, Cal., Importer and Breeder of Pure Bred Poland-China Hogs.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

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A fruit and grain ranch, containing about 100 acres, situated at the old mining town of Knight's Ferry, Stanislaus county, California. The place is extensively planted with fruit trees, vines and berries, all of the choicest varieties, of vigorous growth and bearing abundantly, everything of this kind being raised here with the least possible care and in the greatest perfection. The facilities for irrigation, when required, are first-class, the ditch of the San Joaquin Water Company traversing the grounds. There are on the premises a commodious dwelling-house; a stone store-house of large dimensions, with cellar underneath; a spring-house, containing distillery apparatus and conveniences for making wine; also, stables and all other needed out-houses. This land is well inclosed and every way highly improved. The products of these orchards and vineyards have for twenty years commanded the highest prices in the San Francisco market, the adjacent mining camps having also taken a portion of them at good prices. There are on the land rich gold placers that could be worked with large profit, as sufficient water for the purpose can be had at low rates. The farm-house is but 8 miles from the railroad station and within an easy day's drive of many prosperous mining camps. Work horses, wagons, harness, cows, hay, farming utensils, a quantity of wine and vinegar, and much other valuable personal property goes with the place. As this fine estate must be sold, it is offered, animals, etc., included, at the low price of \$4,000, fifteen hundred of which may, if desired, remain secured on the land at the rate of 10 per cent. annual interest. Title perfect. For further particulars inquire of Claus Gerkens on the premises, or of Dr. Henry De Groot, office MINING AND SCIENTIFIC PRESS, 414 Clay street, San Francisco.

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Indian Pipe.

[Written for the RURAL PRESS by MARY T. RILEY.]



"An Indian pipe stood uplifting,
Its head o'er the desolate plain."

Once over a beautiful garden,
All radiant with color and bloom,
Where the winds were laden with fragrance,
And the air was faint with perfume,

A flame in devouring anger
And pitiless passion swept;
And low in the graves of their brightness,
The beautiful flowers slept.

And there on a sweet summer morning,
When the ashes were sodden with rain,
An Indian pipe stood uplifting
Its head o'er the desolate plain.

Alone in its motionless beauty,
Amid all that blackness, so white,
Like a pure bright star on the bosom
Of a troubled and murky night

A delicate spirit-like flower,
So waxen, one wandered almost
Whether it really were substance
Or only a hyacinth's ghost.

The dream of a flower, down-fallen
From one of the white clouds on high,
Once blooming with myriad others
In the wide-spreading fields of the sky.

A fair flower-saint who had shrived her,
And freed her from passion and pain,
And apart from the world in her cloister,
Kept her garments of life free from stain.

A sad flower telling a story
Of pain with its sweet woodland breath;
A glad flower whispering softly
Of good, and of life out of death.

A beautiful flower to teach us
A lesson of patience and trust,
Like a white soul unsullied by trial,
Unsullied by earth's dimness and dust.

Like the light that shall shine out of darkness,
Like the good that from evil shall come,
Like a finger of light pointing upward,
Straight up to the heavenly dome.

Clinton, Louisiana.

Home Live Stock.—No. 2.

[Written for the RURAL PRESS by MRS. RANCHER.]

How to Keep the Mothers Fresh.

If a cow had been driven over a hot, dusty road, would you use her milk? Yet a mother will work until she can scarcely drag one weary foot after the other, until she is heated and worn out, and then nurse her babe. Now if some of this labor can be saved, is it not her duty to avoid it? Yet because new ways are awkward at first, many keep on the same weary way year after year.

Sunday.

A great hue and cry is often raised about two meals being the Sunday rule; and doubtless if women would strictly forbid themselves ought to eat, after breakfast, until they were ready to provide for the men as well, there would be three meals on Sundays as on week days. Yet there is another extreme; and this I have seen on a ranch. The mother up in good season, with breakfast ready for the early birds, yet obliged to have it linger along, that the late ones

might not go hungry. Dinner served as usual. Supper to be another "square meal," and prolonged like breakfast by those who have been away. Is a woman to be more a beast of burden than a horse or donkey? If she would make it a rule to have breakfast at a certain hour; to have dinner composed of cold meat, bread, butter, fruit with pie or cake if convenient. Supper ready in time for those at home, with a "bit in the hand" for late ones, she would not go to bed so weary Sunday night, and would find herself refreshed for

Monday.

Those who wash at the board, try this plan for four weeks. If you go back to the old way, well and good; but try this: First use the best soap, and plenty of it. The best soap I have found is made in this way: Three pounds unslacked lime, 6 pounds sal soda, 10 pounds clean grease and 6 gallons boiling water. Put lime and sal soda together in a wooden tub. Pour over them the boiling water. Let this stand till the next day, then drain off carefully. It is well to strain the liquid through a flour sack after draining. Put in the grease and boil from 20 to 40 minutes. Turn into a vessel to cool. If mutton tallow is used it may when cool be hard on top and watery at the bottom. Boil again from five to ten minutes and you will have a fine soap, if you use it in this way: Fill your boiler, cut up a bar of the soap and let it come to a boil. Put half this suds in your tub and add a very little cold water.

If you have about six dozen pieces, divide them into two lots. Put the best half into the suds and let them soak 10 minutes. Add the rest of the water boiling and pound well 15 minutes with an old-fashioned pounder. You will find but few soiled pieces left. These rub. If you have a wringer use it, and don't throw it aside because it needs a little oil.

Treat the second lot of clothes likewise. Boil as usual.

When the first lot is boiled put them in a tub of clear water and pound three minutes. It is all the rinsing they need before blueing. Wring them out without stopping to "sozzle" each piece separately. The pounder is a three-fold blessing. It is easier for the back than the wash-board; it is less wearing on clothes; and if the men are not too busy, they might willingly pound for you, when they would not know how to help the usual way.

Ah, well I remember one Monday, when sickness made "the grasshopper a burden," when at dinner-time the clothes were only in the rinsing tub, how two pair of strong arms took the wringer and pounder, and speedily those clothes were ready for the line.

The men deprived themselves of their resting time. God bless our California men for their helpful ways!

If you have no help you must doubtless do cooking and general work on Tuesday. Do not wear yourself out making pies and cake. Hot bread three times a day is unnecessary. Potatoes, if good, are never better than when baked.

When you iron, lay a paper on the table. Fold your sheets as nearly as possible the size of the table. Lay those on each other. Fold common tablecloths likewise and lay on top. Over all spread an old cloth and pin snugly under the corners of the table. Iron on this. Do not iron flour sacks, etc.

Watch, my sister, watch! and if you think you are neglecting your work, ask yourself if it is not better that a few wrinkles be in the clothes than so many in your forehead!

PRECOCIOUS CHILDREN.—Baillet mentions 163 children endowed with extraordinary talents, among whom few arrived at an advanced age. The two sons of Quintilian, so vaunted by their father, did not reach their tenth year. Hermogenes, who, at the age of 15, taught rhetoric to Marcus Aurelius, who triumphed over the most celebrated rhetoricians of Greece, did not die, but at 24 lost all his faculties and forgot all that he had previously acquired. Pica de Miranda died at 32; Johannes Secundus at 25, having at the age of 15 composed admirable Greek and Latin verses and become profoundly versed in jurisprudence and letters. Pascal, whose genius developed itself at 10 years old, did not attain the third of a century. In 1791 a child was born at Lubeck, named Henri Heinekem, whose precocity was miraculous. At 10 months of age he spoke distinctly; at 12 learned the Pentateuch by rote, and at 14 months was perfectly acquainted with the Old and New Testaments. At two years of age he was as familiar with ancient history as the most erudite authors of antiquity. Sanson and Danville only could compete with him in geographical knowledge. Cicero would have thought him an "alta ego" on hearing him converse in Latin, and in modern languages he was equally proficient. This wonderful child was unfortunately carried off in his fourth year. According to a popular proverb, "the sword wore out the sheath."—*English Paper.*

AN EXPENSIVE BOARDER.—The elephant, a large one, kept at the Zoological Gardens of London, seems to be a pretty hearty feeder. His daily food consists of four hundred pounds of hay and three bushels of oats. He washes this enormous quantity of provender down his throat with four barrels of water. Besides all this, he thankfully receives candies, cakes, apples, and such small trifles from his visitors.

An air-tight trunk is the latest novelty. The key-hole is hung on a strap and fastened to the handle.

Woman's Dress.

In Herbert Spencer's theory, that progress is from the simple to the complex, is correct, the attire of the American woman of to-day shows an amount of progress which ought to—and doubtless would—astonish Aspasia mightily. Man, however, reached his climax some time ago, in the matter of costume. Since Pepys confided to his diary the questions about buckles and ribbons which vexed his soul, and Goldsmith was dodging the tailor who made him his beloved "plum-colored velvet," man has retrograded into sober, simple costume. It is, perhaps, regret for his own vanished glories that induces him to regard women as unduly devoted to fixings and furbelows. It is probable that Sir John Lubbock wrote the sentence in which he stigmatises love of ornament as one of the chief characteristics of savagery with subdued enjoyment, and that he showed it to Lady Lubbock—if such a person exists—with satisfaction and self-complacency. The weaker sex certainly has not lacked advisers of either sex to show it the errors of its way and its wardrobe. The recent Women's Congress in Chicago discussed dress reform with destructive vigor. The foes of the corset maligned it by the hour, and displayed their suspenders as proofs of their emancipation from prejudice and as foreshadowings of their coming to man's whole estate. More than one physician, indeed, has advised a compromise garb, half-way between the styles now worn by the two sexes, and Lucca has shown in her page's attire as Mignou, that such a costume may be as dainty as heart could wish. Such a sweeping change, however, must find footing in the far future, if anywhere. Reform moves as slowly in dress as in politics. Some English artists of high repute tried, some time since, to substitute certain tasteful designs of their own for the season's fashion-plates, but the scheme did not succeed. The famous artist with which William Morris is connected is said to contemplate ornamenting the persons, as well as the houses of its patrons, but has not yet carried the design into effect. One or two feminine artists in London have lately done something in this way. M. Charles Blanc, the brother of the ex-revolutionist, has just published a book on the art of dress. The work shows the French passion for generalization, as when M. Blanc observes that bonnets are worn large "when religion is in fashion," but it is full of shrewd sayings. The author discusses the color and form of the raiment of each sex, and plays barber, shoemaker, dressmaker, milliner and tailor by turns. He objects to the expanse of white linen revealed by a man's dress suit, but fails to suggest a substitute. That substitute is certainly not to be found in a vest cut close to the throat. A double-breasted vest is the only semi-graceful form of that ungraceful garment, and that this is too heavy to harmonize with full dress, which, by an old contradiction of terms, must be lighter than half dress. A man bisected by buttons from his waist to his neck is not a pleasing object. M. Blanc puts his general theory into a nutshell, thus: "Adornment should serve only to make the woman thus adorned, admired. Men often say, 'we have seen some beautiful dresses.' Ah, well, if the dainty dresses had been still more dainty, they would say, 'we have seen some beautiful women.'"

GOOD TIMES FOR YOUNG MEN.—A recent writer on the state of trade says with much truth: Young men coming upon the stage of active life during the present hard times are much more likely to be permanently successful than those who made their advent in business during the period of inflation, of high prices and of fabulous nominal profits. The great reason of this is that young men who begin now from necessity, form their business management and personal habits on principles of rigid economy. These in the long run tell so powerfully as to make, in many cases, the difference between failure and success. Men who began when everything was at the top find it very embarrassing to come down and adapt themselves and their business to the times that try men's purses, as war is said to try their souls; whereas those who commence when economy is the order of the day experience no difficulty whatever in starting upon an economical basis, and once started it will be easy to adhere to it. So that for young men just embarking for themselves we may almost assert the paradox that bad times are the best.

THE FIRST FINGER-RING.—An amusing myth is told of the origin of the finger-ring. When Jove released Prometheus from the bonds by which he had been confined, he condemned him, as a sort of penance—perhaps somewhat after the fashion of a modern ticket-of-leave—to wear upon his finger as a ring, a link of the iron chain that bound him to the Caucasian rock, in which was set a fragment of that rock itself. In this way, so fable goes, the custom of the finger-ring originated. There is every reason to believe that use of the engraved stone began with the Greeks, and from them was copied by their servile imitators, the Romans. It is every way a convenient and natural one, and our grandfathers' custom of wearing their seals at the fob, as it was called, or hanging from the side-pocket, was a recurrence to old Assyrian usages, which did not long hold its ground.

At Detroit bread was made from grain four minutes and a half after it was cut in the field. Nobody was in a hurry for dinner or they would have been four hours and a half.

Photographing at Night.

Many attempts have been made to produce photographs by artificial light. Practically these efforts were successful; but, artistically considered, the resulting pictures were very unsatisfactory, and could even be called decidedly bad, by reason of the defective illumination, which caused only white and black to appear and a total absence of middle tints, which are the charm and essential virtue of every good picture. They were scarcely as good as the very first attempts to make photographs of the human face by Prof. John W. Draper, of New York, in 1839, and looked as if the sitter had been placed in direct sunlight. As portraits they were so objectionable that nobody liked or wanted them. The *Manufacturer and Builder* says that Mr. Henry Van der Weyde, now residing in London, England, corrected this by inventing a method to so manage the electric or other lights used as to equal the day effects and produce an artistic picture, a problem the solution of which does not fall in the direct line of pursuit of the ordinary photographer, but exactly in the line of pursuit of the portrait painter, in which art Mr. Van der Weyde has earned a great reputation. The pictures thus taken by diffusing the light on the half shaded parts, so as to bring out the semitones, are fully equal and generally even surpass those produced on the brightest days in London. The artificial light is easier to manage than the sunlight, being always under control, if the photographer only knows how to apply it. It is not surprising then that this process has become quite popular in London, especially among those who attend operas, theaters, balls, concerts or dinner parties, when, in going or coming, people are dressed in their best and can more conveniently sit for their pictures than during the bright hours of the day, which are rarely convenient for persons who have to attend to business, and even for people of leisure who indulge in late hours and late risings.

CROSS QUESTIONS AND CROOKED ANSWERS.—The absurd interrogatories at times proposed by examiners in board-schools often produce ludicrous answers; indeed the cleverest children would seem to be those who, instead of answering the examiners according to their folly, dodge them humorously, and reply as though they were dealing with mere propounders of conundrums. A clockmaker's daughter, called upon to explain the meaning of "the devil and all his works," said that his "works" meant his inside. A boy of genius was asked what he understood by "poor in spirit," replied: "Them as have little gin left in their bottle." Conscience having been described as "a inward monitor," the inspector called upon an intelligent pupil to say what a monitor was, when the youth replied: "A hironclad." Such answers as "Turkey is the capital of Norfolk," "Tureen is the capital of Chimer," would pass in a burlesque as jokes. The boy, however, who gave "Devonshire, Exeter, Littikus, Numbers, Stronomy, Jupiter, Judges, Ruth, etc., as the names of books of the Old Testament, was apparently in earnest. So also was that other lad who, full of what Strauss would have called "the stern common sense of ordinary mankind," said that he did not know what a miracle was; that if he saw the sun shining overhead at midnight he should call it the moon; that if he were told it was the sun he should say it was a lie; and that if the school examiner in person declared positively that it was the sun, he should say that the school examiner was "werry drunk."—*Agr. Advertiser.*

BEECHER ON INDISCRIMINATE CHARITY.—There is that passage in Matthew, "Give to him that asketh thee, and from him that would borrow of thee turn thou away." If you take that literally I will give the world a hundred years to go to hell altogether in a heap. It was tried once in Italy, in the Roman church. It raised up 500 beggars, 5,000 beggars, 500,000 beggars. By that charity of the Roman church the State was almost ruined, the whole manhood of the old Italian race was blotted out. By a system of indiscriminate charity you corrupt men to the very core; that system undertakes to make the church or the state take care of men is sure to corrupt mankind to the very bottom. When you undertake to help men the proper way is to help them help themselves. I think that this charity which this church has extended during all the years of my ministry has been more harmful than it has been beneficial, and the true axiom, next to the want of charity the most dangerous thing is charity.

"A QUARTER OF AN HOUR BEFORE TIME."—It has been well said that industry is of little avail unless it be seconded by punctuality, a habit which may be acquired with but slight perseverance by every one. Perhaps these combined qualities were never so well exemplified in the career of a public man as in that of the Duke of Wellington. It is said that when on one occasion he was making an appointment to meet a famous engineer early on the morning of the following day, the latter remarked, "I will take care to be punctual at five." To this, Wellington replied, with a quiet smile, "Say a quarter to five. I owe all I have achieved to being ready a quarter of an hour before it seemed necessary to be so; and I learned that lesson when I was a boy."—*Little Folks' Magazine.*

Chaff.

In a bee line—honey producers.
A stare-case—watching the eclipse.
As the elbow is bent the swig is inclined.
Now is the time to sow umbrellas, so as to pick early ones in October and November.
Do you wish to get up with the lark? Then go to bed without it.

CODFISH and smelts hybridize—at least we often have smelt-codfish at restaurants.
Young men and corn always "pop" better when they get over being green.

SAID an Irishman, in the course of an eloquent speech, "Mr. Chairman, the gals is the boys to do it."

A PENNSYLVANIA doctor has secured a gorilla's body for dissection. His hunting on the back t(r)ail for Darwin's theory.

SPIKES says he is going to have an almanac published as soon as he can invent a patent medicine to go with it.

GERMANY no longer subjects American pork to microscopical investigation. Just if our hogs ever were so small as that.

THERE is an old lady living less than three miles from this city who firmly believes that more men marry than women.

A YOUNG woman in Sacramento has become a raving maniac through a single year's use of arsenic. Wasn't she insane to use it?

WHAT is the difference between the death of a barber and sculptor? One curls up and dyes, the other makes faces and busts.

SLAVERY has been abolished in Madagascar, and now there are 300,000 people there who are troubled to know what profession to choose.

A SNAKE in Pennsylvania allowed himself to be cooked alive rather than to come out of a dinner pot and face three women with clubs.

Hook said to a man, at whose table a publisher got drunk: "You appear to have emptied your wine-cellar into your book-seller."

AN Indiana girl has this season cleared \$600 on broom corn. She hawled her own corn without handles, and has all her corns on her hands.

THE fat girl of Iowa, who weighed six hundred pounds, is dead. It used to be her regretful boast that she never sat on a man's knee in all her born days.

ENGLAND is adopting our agricultural implements. This comes from borrowing needles and such from the East. Egypt took our plows and reapers long ago.

CHICAGO has commenced to arrest tramps and fine them \$100 a piece. Nothing makes a tramp feel so wretched as to make him hand over twenty five dollar bills.

It is said that it is not uncommon for Spanish ladies to possess as many as a hundred fans at once, hoarding them as a miser would coin. Ah, yes; we suppose they are fanatical.

A MAN killed a gray eagle measuring 7 feet from tip to tip, in Ohio, the other day, by throwing a bottle of shoe polish at it and hitting it on the head. Exactly polished him off.

Brandy has been made from sawdust. Ice is packed in sawdust, and that is why so many water-drinkers become intoxicated. It is the sawdust on the ice that makes a man reel.

ALL hair pins look alike to men, but let a wife go off on a visit for a month, and come home and find a hair pin near the door, and she can't wait a minute to get red in the face.

A CLOTHIER has excited public curiosity by having a large apple painted on his sign. When asked for an explanation, he replied: "If it hadn't been for an apple, where would the ready-made clothing stores be to-day?"

A MAN very much intoxicated was taken to the station house. "Why did you not bail him out?" inquired a bystander of a friend. "Bail him out!" exclaimed the other; "why you could not pump him out."

MATT CARPENTER got \$1,000 from the Detroit liquor dealers to study up the constitutionality of the Michigan liquor law. He sent his opinion last week. It was very brief and to this effect: "You can't break the law."

The average human body is made up of several pails of water, a mass of charcoal sufficient to cook a good dinner, a quantity of hydrogen sufficient to float a small balloon, a piece of iron large enough to make a pocket knife, a lump of phosphorus large enough to make half a dozen boxes of lucifer matches, also various proportions of soda, potash, lime, magnesia, oxygen, chlorine and nitrogen. Where is the brass?

ONE of the school board, going his rounds as an amateur, put the following question to a scholar in a country school: "How do you parse 'Mary milked the cow'?" The last word was disposed of as follows: "Cow is a noun, feminine gender, singular number, third person, and stands for Mary." "Stands for Mary!" exclaimed he of the board, "how do you make that out?" "Because," added the intelligent pupil, "if the cow didn't stand for Mary, how could Mary milk her?"

The letter E is used more than any other letter in the English alphabet. Each of the following verses contains every letter of the alphabet except E:

A jovial swain should not complain
Of any buxom fair
Who knocks his pain and thinks it gain
To quiz his awkward air.

Quixotic boys who look for joys
Quixotic hazards run;
A lass annoys with trivial toys,
Opposing man for fun.

A jovial swain may rack his brain,
And tax his fancy's might;
To quiz is vain for 'tis most plain
That what I say is right.

Young Folks' Column.

Honesty Rewarded.

George and Harry, two young mechanics of much promise, worked in the same shop, but as the working season was almost over and there would be little work to do during the summer months, their employer informed them as they settled up on Saturday evening that he could only give one of them work thereafter. He was very sorry, he said, but it was the best he could do. He told them both to come back on Monday morning, and that he would decide on the one he wished to remain. So the young men returned to their boarding house a good deal cast down, for work was scarce and neither one knew where he could obtain a situation if he was the one to leave.

That evening, as they counted over their week's wages, said Harry to his friend:

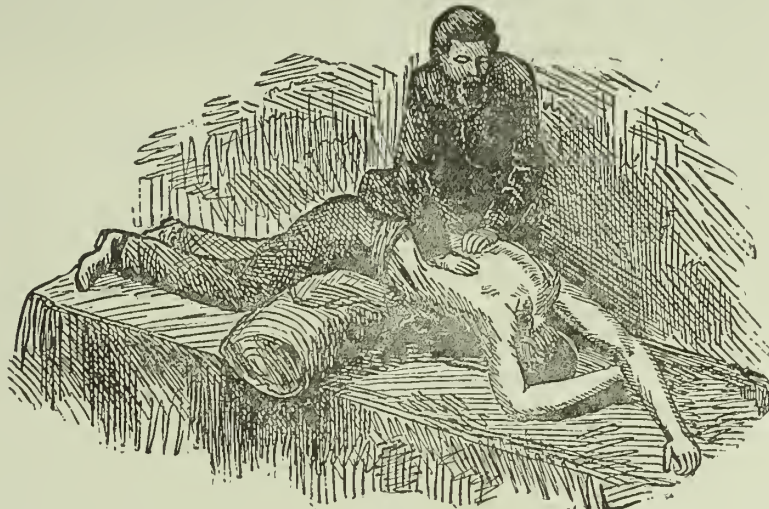


FIG. 1. EXTRACTING THE WATER FROM LUNGS AND STOMACH.

"Mr. Wilson has paid me a quarter of a dollar too much."

"So he has me," said George, as he looked at his.

"How could he have made the mistake?" said Harry.

"Oh, he was very busy when six o'clock came, and handling so much money, he was careless when he came to pay our trifle," said George, as he stuffed his into his pocket-book.

"I am going to call on him this evening and return my quarter to him," said Harry.

"You are wonderfully particular about a quarter," said George. "What does he care for that trifle? Why, he would not come to the

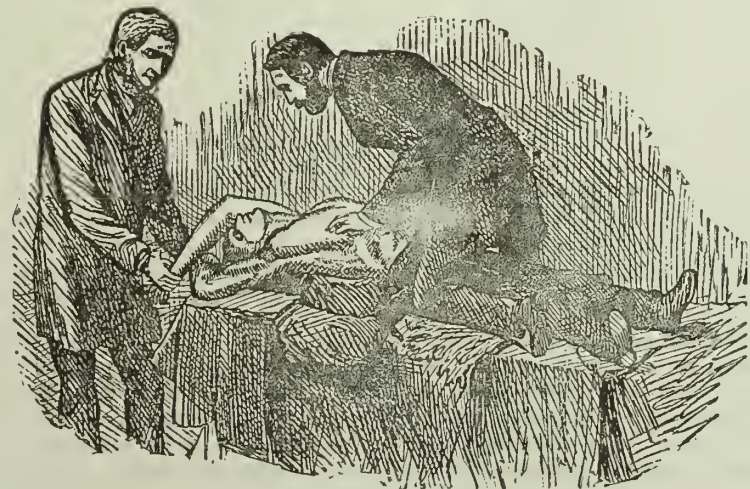


FIG. 2. INDUCING THE LUNGS TO RESUME THEIR FUNCTIONS.

door for it if he knew what you wanted, and I am sure you worked hard enough to earn it."

But Harry called and handed his employer the money, who thanked him for returning it and went into the house. Mr. Wilson had paid each of them a quarter more than their wages on purpose to test their honesty.

So, when Monday morning came, he seemed to have no difficulty in determining which one he would keep. He chose Harry, and entrusted the shop to his care for several months when he was away on business, and was so well pleased with his management that when work commenced in the fall, he gave him the position of superintendent. Five years afterward Harry was Mr. Wilson's partner, and George worked in the same shop again, but as a common laborer.

There is nothing like a good character when you want employment. Some young men can always get work, no matter how dull the times are, while others can find nothing to do when hands are scarce, simply because they cannot be trusted.

A LITTLE four-year-old, a native and resident of New Jersey (give the State her due), while watching the lightning from his nursery window a few evenings since during a storm, turned to his nurse and remarked that "God was scratching matches against the sky."

GOOD HEALTH.

Resuscitating the Apparently Drowned.

We recently gave a description of the method of restoring drowning persons as laid down by Dr. Howard, who, as medical officer of New York harbor, has had much to do in the resuscitation of persons apparently drowned. We repeat the description in order to introduce sketches of the operations and thus make them more clearly intelligible. Dr. Howard's method has received the approval of the New York Academy of Medicine. It has already received the prize of the American Medical Association, and has been adopted by the Life Saving Society of New York. His method is described as follows:

Fig. 1. To Pump and Drain Fluids from



Lungs and Stomach.—This is done by placing the patient's face downward over a hard roll of clothing, so that the pit of the stomach is the highest point, while the mouth is the lowest. The operator supplements the pressure of his hands upon the back of the patient, above the roll, if necessary, with all the weight and force at his command.

Fig. 2. For Artificial Breathing.—The patient, whose clothing is ripped open from the waist, is laid upon his back, and the pit of the stomach is made the highest point by a hard roll of clothing beneath the back, while the head is the lowest part. The wrists are crossed behind the head; these a second person, if present, pins to

DOMESTIC ECONOMY.

Unfermented Wine.

EDITORS PRESS:—I desire to urge upon our people the great advantage that might be derived from a habit of using our grape juice without fermentation, or, in other words, we need to get in the habit of using the grape for food, for nourishment instead of destroying the nourishment and drinking the alcohol. Were the habit once formed of using the unfermented juice at our meals as a common drink, we should soon have use for every acre of grape land we have and the grape crop would be our most valuable crop.

The juice can be put up in bottles easily, in this way: Scald the juice and strain out the skins and seeds, and, while hot, take towels or some coarse cloth three or four thicknesses, wet in water and spread on a board or table and set your bottles on it and fill, cork and seal the same as you would in canning fruit. By letting it cool a little before removing, you will not break one bottle in a thousand. I have never broken a jar in this way yet. After a while the acid in the juice crystallizes like lumps of salt, and the longer it stands the sweeter it gets. If any one knows of a better way of keeping the juice let us have it. This is worthy the attention of the best minds in the State.

Mountain Glen, September 8th.

A Budget of Recipes.

Neapolitan Cake.—The whites of 15 eggs, one and a fourth pounds of sugar, one and a half pounds of flour, three fourths of a pound of butter, beat together; 11 yolks of eggs, 3 cups of sugar, 4 cups of flour, half pound of butter, 1 teacup of buttermilk, 1 teaspoon of soda, one and one-half pounds raisins, half pound currants, one-fourth pound dry citron, half cup of brandy, nutmeg. Add one-fourth of the white batter with fruit batter. Bake in one inch pans and ice together in alternate layers. This calls for 3 of each.

Tomato Hash.—Butter a dish, put in a layer of peeled and sliced tomatoes, a layer of cold meat in thin slices, and a layer of bread and butter, and so on until the dish is full; add seasoning to the layers. Pour beaten eggs over the top and bake brown.

A la mode Beef.—Take a round of beef, from 3 to 4 inches thick, and pound well; make as many incisions in the meat as possible; mix thoroughly blades of onions with ground cloves, salt and pepper, and into each incision put 2 blades of onions with one long, narrow strip of pork. When the roast is filled in this way pack tightly in a jar and cover with vinegar. Let stand 2 days, turning twice in that time. To cook it, put butter and pork in a pot, lay in the meat, add a little water to prevent burning. Cover closely, and let it roast on the back of the stove for 3 hours; season again with pepper and salt and one pulverized laurel leaf, and dish when nicely browned.

Baked Stuffed Tomatoes.—Good sized fruit of regular shape is required. Cut a slice from the blossom end and scoop out the pulp; take cracker or bread crumbs, salt, pepper, a little thyme, butter, mix well together and fill the cavities in the tomatoes, rounding it up well; set in a dish and bake for about three-quarters of an hour. Some replace the top piece or stem end, but we prefer to leave it off and allow as much juice as possible to evaporate. Another way: Cut a conical plug from the seed end of the tomato, cutting half through the fruit or more; mix dry crumbs with seasoning and butter, as above; form cones or plugs to replace those cut from the tomatoes, and bake as before.

Peaches with Rice.—Take some peaches and cut them in halves; simmer them in a syrup for half an hour, then drain, and when cold arrange them on a dish around a shape of ice made as follows: Boil 3 tablespoonfuls of rice, picked and washed clean, in a pint of milk, with sugar to taste, and a piece of vanilla; when quite done put it into a basin to get cold. Make a custard with a gill of milk and the yolks of 4 eggs; when cold mix it with the rice. Beat up to a froth a gill of cream, with some sugar and a pinch of isinglass dissolved in a little water; mix this very lightly with the rice and custard; fill a mold with the mixture and set it on ice. When moderately iced turn it out on a dish and serve.

Centennial Brown Bread.—Fill a large bowl one-third full of water, a little warmer than tepid; add half a teaspoonful of salt, and stir in shorts a little stiffer than pancake batter; cover, and set where it will keep warm without scalding till light; then turn into a large basin. Add a pint of lukewarm water, half a teaspoonful more salt, with 2 tablespoonfuls of good brown or coffee, sugar and stir in Graham flour till as stiff, not as stiff as it can be made, but as it can be conveniently made with a spoon. (If made too stiff the bread will be dry.) Grease the tins, turn in the dough, smooth over the top with a knife or spoon; set again to rise, and, when sufficiently light, bake in a tolerably hot oven an hour or more, according to the size of the loaves. This quantity will make 2 large or 3 small loaves.



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SAN FRANCISCO:

Saturday, September 21, 1878.

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The Week

On go the fairs. We are in the heart of them. As we write, the State Fair at Sacramento is entertaining its thousands, and all reports by telegraph indicate a success in point of exhibits, attendance and money receipts considerably in advance of anything attained before. Next week the tide of interest will flow in several channels, for three large districts, centering at Petaluma, Stockton and Marysville, will hold their Fairs on the same series of days, and county exhibitions, as in Contra Costa, will call out the local pride in production and manufacture.

Scenes at Fairs have always been and will always be similar. In the wake of the judges there is still the old troubled water as interests clash. The victors exult and praise the "most learned judge;" the unsuccessful nurse their wrongs and cite plentiful instances of judicial wrong and folly. Thus the feeling runs from the bearded exhibitors of mammoth bulls in the stock stalls to the charming misses whose hearts swell or break over the fate of their biscuits or needle work in the pavilion. Such experiences are somewhat analogous to those in the wider circles of our lives. We all run in the race, but few obtain the prizes of complete outward success. And even those who triumph may have a garland upon the brow and an ache beneath it. Truly happy alone are they who have within the consciousness of well doing.

ON FILE.—"Pruning Saw," W. H. J.; "Marin County Stock Ranch," H. E. H.; "Salinas Sundries," E. B.; "Notes at San Jose," G. R.

Where Shall We Put the Surplus?

During the passing weeks there are immense sums of money being distributed among the agricultural producers of the State in return for the grand weights of grain, fruit, vegetables, wool, hops, etc., which are now being marketed. Many of our farmers will have surpluses of coin—hard, yellow dollars, and yet very restless dollars; heated dollars, burning in the pockets until some use is made of them.

Just as these rewards of industry are coming into the hands of producers, there has sprung up a spasmodic activity in stock gambling circles. The "street" is in a fever of excitement. Stock which at times has sold at two bits a share, has reached a market rate of more than \$100; other stock which has been absolutely below any price, and which is perfectly worthless, intrinsically, is now being bought and sold at a price, because there may yet be "a gamble" in it. People are losing their heads, as they have been lost before. The water is running rapidly toward the vortex. Professional pilots are cruising around the maelstrom, anxious to guide the unwary, not away from but into it. The fires are lighted in the grim Moloch, and votaries are bring in the verdant babes that they might linger awhile in the burning embrace of the "market," and then tumble headlong into the furnace of destruction beneath it. A short time hence and the fires will burn low again, because the fuel of gullibility is exhausted, and the old, old story of ruined fortunes, plundered homes and desperate suicides will be repeated.

We regret this fresh outbreak of the gambling mania, generally, because it is demoralizing and deadening in its final effects upon all legitimate industries; we regret it especially at this time, because it comes when thousands of our agricultural producers will have surpluses in hand, and many of them will doubtless be wheedled into risking their season's profits in the intricate labyrinth of the stock market, instead of wisely investing it in legitimate enterprises, which will redound to the credit of the State, or bestowing it upon the improvement of their own property, and the embellishment of their homes.

Of course, when we caution all against the almost certain destruction in the stock market, we do not mean to discourage investment in legitimate mining enterprises. That is a wholly different matter. There is no reason why a farmer should not invest some of his money in developing mines which commend themselves to his judgment. Sometimes he will gain good returns directly and at the same time, by building up a mining community, he can develop a good market for his produce. There are many locations in the State where these opportunities exist. Investing money in legitimate mining is a very different thing from risking it in the pure, and yet most impure, gambling which prevails in this city.

It will be a most unfortunate thing if the present excitement in "stocks" succeeds in drawing in the surpluses which many of our farmers will soon have in their pockets. It will be unfortunate because the money will be lost to those who have earned and should enjoy it. Not one in a hundred, perhaps in a thousand, of those who are drawn in during an era of high values in the stock market, ever gain back what they invest, much less make anything from their folly but dearly-bought experience. There may be in cards such a thing as a "square game;" it is doubtful if such a thing exists in stocks. It will be unfortunate if agricultural surpluses are lost in this way, because there is hardly a ranch in the State which would not pay a good percentage on money wisely invested in improving it. By thus wisely investing his extra money in heightening the fertility of his soil, by introducing new crops, new fruits, improved animals and better machinery, the farmer will find his resources constantly increasing and his income growing larger each year. Nor should the home be robbed of its progress to feed the unholy fires which now are blazing brightly on the gamblers' altars. If the year's work has yielded a profit, let the good wife have her share to gratify her tastes and provide comforts for the family, in new furniture and carpets, new music, new books and newspapers, new pictures, new kitchen utensils; in short, in any direction of home improvement which will make wife and children happier and more in love with their home. A little light in the home this year may fill many lives with joy.

We know no life in the world more pleasant, more independent and more to be longed for than that of the prosperous farmer, who has clear title to valuable land, cultivates it intelligently, in whose practice there is constantly infused the spirit of improvement, and in whose home there are comfort, happiness and the means for educating his children in practical and esthetic cultures. Such a life and such a home can only be enjoyed by those who give the farm and home what they rightly earn and deserve. On the other hand we know no more unsatisfactory and deplorable life than that where every possible dollar of income is denied the farm and the home and squandered in outside hazards. Oh! there are enough such homes in our State already. We beg our readers to guard their thoughts and pockets well, that the number is not increased. Let the conflagrations in the gambling mart burn those possessions upon which it has already fastened, but by all that you hold dear, do not add fuel to it lest it destroy you!

Carpe Carpan!

All indications now are that many tons of wholesome food will speedily result from the half dozen pioneer carp which found their way to this State, in the satchel, so to speak, of an enterprising German, Mr. Poppe, of Sonoma. Many carp growers now have the fish in shape for those who desire to introduce them in their waters. We know of ponds in different parts of the State, but Sonoma county is going forward most rapidly in the new industry. The Sonoma Democrat tells of a "large carp pond in the course of construction on L. D. Latimer's ranch, two miles east of Windsor. The pond will be between 250 and 300 feet in diameter when completed, and is in one of the most favorable situations for the purpose, as about a dozen springs in the bottom supply it with water which bubbles to the surface in great abundance, while the situation allows ample drainage. The pond is the largest we know of in this county, and a large quantity of fish can be raised in it." The Healdsburg Flag gives the experience of J. L. Seward, a farmer eight miles southwest of that town, who started a year ago last February with five two-year-old fish from Mr. Poppe, and a year ago last month he added six more. At that time all in the pond were 14 to 18 inches long; and to show how rapidly they grow he says that they are now all over two feet long, and their progeny may be counted in myriads. Thus, and by the experience of others already given in the PRESS, it is clear that the most carping critic must admit that carp culture is established upon a good basis in this State.

Knowing the interest of some of our readers in this subject, we gave some months ago the experience of Mr. Levi Davis and Mr. Oliver, of Forestville, as to rearing and feeding the fish. We also gave a piece of foreign experience as to the way fat carp are obtained in Germany. We have now an interesting account of the way carp are harvested and sent to the Berlin market. The account from which we shall take leading points is translated for the *Mark Lane Express* from a Berlin newspaper. It seems that the great carp farms for the Berlin market are situated on the Ural-Baltic plateau, which contains a large number of lakes and ponds. Of these the Pietz lakes are the most important. These lakes, 76 in number, and forming a water area of 5,000 acres, are a royal domain, and are at present rented to Mr. Th. Berger. After the first year in the life history of the young carp, they are placed in ponds usually covering about 30 acres apiece, at the rate of 360 to 600 fish per acre. After they have stayed in these ponds a year, the fish (now two years old) are placed in still larger ponds (generally covering an area of 400 acres each) at the rate of 180 to 360 per acre. After another year has passed, the fish (now three years old) are placed in large ponds, generally about 900 acres each, in which they stay another year, and reach an average weight of 2½ to 3½ pounds, and thus attain their maturity.

As the annual fishing days come round, the scene at the lakes grows very exciting. Three weeks beforehand the fishermen begin to let the water flow off, and the carps gradually gather in the deep runs or holes of the bottom. On the morning of the great fishing day they are driven into a basin about the size of an acre and about one meter deep. This is done by the fisherman, who, armed with purse-nets, wade,

often with half their bodies in the muddy water, and, shouting and yelling, drive the fish before them. Slowly the great mass of fish comes rolling on, making the water of a dark, muddy color, and throwing great quantities of mud-like clouds in the air. No one could tell that these are carp, for the dark, round backs, which in innumerable places become visible among the scething mud and water, rather resemble eels or similar fish. The whole spectacle, which is quiet in the beginning, reminding of the driving of a flock of geese or a drove of sheep, gradually becomes quite exciting, especially towards the end, where from 60,000 to 70,000 pounds of carp are crowded together in a narrow space scarcely 20 paces square. Two simple nets are, nevertheless, sufficient to close up the two channels leading into the basin, which now resembles a cauldron full of boiling mud and water. Now the fishing itself commences, and a number of men with two dragnets, each holding about 5,000 pounds of fish, slowly haul that quantity on shore. After they are successfully brought to terra firma they are transferred a short distance to an open shed, where there is a large pair of scales with a 100lb. weight attached. The carp are uninterruptedly brought up from the pond in immense buckets, each carried by two stout men, and thrown on boards by the side of the scales. With lightning-like rapidity one fish after another is seized by men standing there for the purpose, counting, "One, two, three, four," until the scales are evenly balanced. Thirty-one to 33 fish generally make 100 pounds. The full scale is then immediately seized by two men, whilst an empty one is being filled, and the fish are placed in large casks on one of the many wagons which load at a short distance. As soon as the three casks, which every wagon holds, are filled, the wagon is driven rapidly along the turnpike, near which the whole transaction takes place, to the Hammer canal, where the fish are immediately placed in the holds of boats, which contain water. Each of these boats carries 2,500 pounds of fish. They are then transferred to the various centers of commerce, and the number consumed would seem marvelous when it is borne in mind that as many as 500,000 pounds of carp are annually sold in Berlin alone.

Such is the story of a carp harvest for the Berlin market. No one can tell how long it will be before such an amount can be sold in our cities; but as the fishermen report the supplies of bay fish constantly decreasing, it will be well to have something so excellent as the carp to send in from private waters.

THE MARKET FOR RAISINS.—It is not possible yet to tell what will be the amount of raisin production in this State this year, because in a growing industry one cannot tell how many new producers to count in. There are, however, some reasons for not anticipating an excessive production, because the grapes do not promise large returns in some parts. There seems to be reason to look for a good price for all raisins which can compete with the Malagas, because the Spanish crop is reported short. Messrs. Crooke Brothers & Co. in their Malaga circular of August 15, 1878, say: "Our Muscatel vineyards have suffered much from want of rain during the Winter and Spring months, and it is generally believed that the present crop will be a short one. If years of scarcity are frequently profitable ones, certainly the prospects of the present one should afford sufficient encouragement to importers of our produce. The opening price for raisins depends entirely upon the number of orders for early shipment." The amount of raisins shipped to the United States from Malaga during 1877 is said to be 1,050,161 boxes; 1876, 1,350,000 boxes.

BERMUDA GRASS.—A compositor, who does not know beans, agriculturally speaking, succeeded in tangling up Mr. Olden's article on Bermuda grass in the PRESS two weeks ago. He had it that walking on Bermuda grass was like "treading on wood." Mr. Olden said it was like "treading on wool." Mr. Olden spoke of planting the cuttings "four feet apart each way." The compositor planted it "four feet apart each May." If this compositor pursues this evil way, Bermuda grass may soon be weaving its tangled mat above him.

ALMONDS.—A Malaga report says that almonds are very scarce and the price is expected to rule higher as the season advances.

The Detection of the Glanders.

EDITORS PRESS:—Will you please describe in the next issue of your valuable paper the symptoms of the horse disease called glanders, in its incipency and later stages?—A. L. S., Borden, Fresno Co., Cal.

We comply with this request at once, because no subject is at present more engaging the attention of horse owners. Just what state of distribution the disease is in either in city or country, we do not know, but the reports of cases in this city and the cases in Santa Clara and Merced counties, where the disease has been communicated from horses to men, makes the detection of the disease in all its stages a matter of much public importance. Therefore we shall introduce both description and illustration that the subject shall be clearly intelligible, and in doing so shall draw upon an able work, "The Illustrated Horse Doctor," written by Edward Mayhew, an eminent veterinary writer and member of the Royal College of Veterinary Surgeons of England. He, in common with other recognized writers, takes the ground that there is no cure for glanders because it is an ulcerative disorder which hastily disorganizes the parts which it attacks. The fact that so many cures for glanders are put forth by practical men who have had success with them may be owing to the fact that they had treated diseases which had some of the marks of glanders, but not the disease in its aggravated form. When the disease is established beyond question by the marks which we will describe, the beast should be killed, and all other animals removed from chance of contact with places he has frequented.

In the early stage it is difficult to pronounce positively upon a case of glanders. Ulceration of the nasal membrane would be confirmation of the worst doubt; but the ulceration may be situated so high up as to defy all our efforts to distinguish it. Yet running from the nose may be perceptible and the gland may be fixed to the jaw. Both of these symptoms, although lawfully provoking our fears, are frequently attendant upon aggravated or upon prolonged colds. The only lawful test in such cases is the administration of three doses of solution of aloes, eight ounces to the dose, allowing three days to elapse between each. If the horse be glandered, before the last purgative has set, the real nature of the malady will be apparent in the aggravation of the symptoms. If glanders be not present, a little careful nursing will generally remove all effect of the medicine.

The glanders is mostly ushered in by febrile disturbance. The appetite is bad, the coat stares and the pulse is quickened. A mash or two, however, apparently sets all right and the matter is forgotten. Soon afterward a slight discharge may issue from one nostril; but it is so very slight it excites no alarm. (See Fig. 1.) One of the lymphatic glands, on the same side as the moist nostril, alters in character. It may remain loose and become morbidly sensitive. Usually, however, it grows adherent to the jaw, turns hard, insensitive, and, from being wholly imperceptible in the healthy animal, enlarges to about the size of half a chestnut.

At a latter period, the discharge, retaining its clear appearance, becomes more consistent, and, to a slight degree, the hairs and parts over which it flows are incrustated. It subsequently adheres to the margin of the nostril, and then in the transparent, albuminous fluid may be seen opaque threads of white mucus. This marks the second stage. (See Fig. 2.)

The next change takes place more rapidly. The transparent fluid entirely disappears and in its place is seen a full stream of unwholesome pus. (See Fig. 3.) At this time there is some danger of glanders being mistaken for nasal gleet. A little attention will, however, rescue any person from so imminent a peril. The smell of glanders is peculiar. It is less pungent, but more unwholesome, suggesting a more deep-seated source than characterizes the disease with which it has been confounded. The ejection of glanders, moreover, is obviously impure, whereas that of nasal gleet generally flows forth in a fetid stream of thick and creamy matter.

When the third stage is witnessed, the disease is rapidly hurrying to its termination. The membrane of the nose changes to a dull, leaden color. The margins of the nostrils become dropsical and every breath is drawn with difficulty. The deflection exhibits discoloration. Scabs, masses of bone or pieces of membrane,

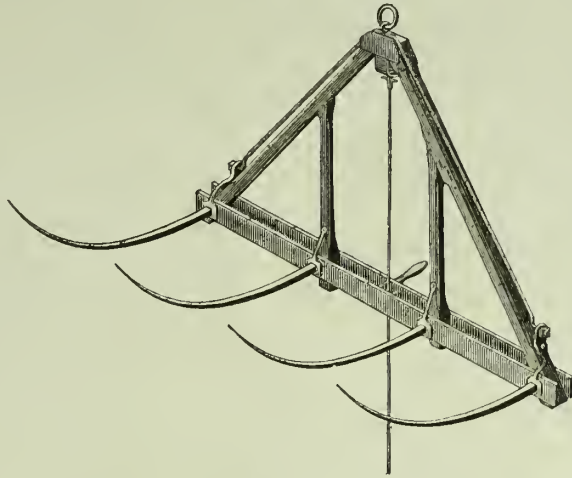
mingled with patches of blood, next make their appearance, and the internal parts are evidently being broken up by the violence of the disorder. (See Fig. 4.)

The reader has been told what constitutes glanders. He has been instructed how to recognize its more marked indications. There, however, remains to teach him the manner in which a suspected horse should be handled or examined. The animal's head should be turned toward the strongest light obtainable; if toward the blaze of the noonday sun, so much the better. The examiner should then place himself by the side of the creature's head, not in front, but in a situation where, though the ani-

mal should snort, he is in no danger of the ejected matter falling upon him. With one hand the upper and outer rim of the nostril should be raised; when, grasping this part between the finger and thumb, no fear need be entertained. The case would be something more than suspicious, were any risk of contamination incurred. (See Fig. 5.)

The wing of the nostril being raised, the examiner must note the appearances exposed; this he will best do by knowing where to look and what to expect. His eye has nothing to do

with the fauces, pharynx, and larynx; all becomes ulcerated. Not a particle of food can be swallowed; not a drop of saliva can be deglutated; not a breath of air can be inspired, without the severest torture being experienced. As the disease proceeds, the obstruction offered to the breathing grows more and more painful. Farcy breaks forth, and, as a consequence, superficial dropsy is added to the other torments. The edges of the nostrils enlarge; the membrane lining the cavities bags out, while the fauces and larynx contract; the discharge



JACKSON'S LIGHT-WEIGHT HORSE-FORK.

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FIG. 1.

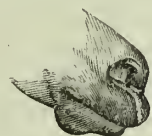


FIG. 3.



FIG. 2.

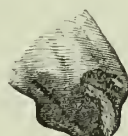


FIG. 4.

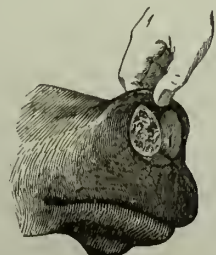


MANIFESTATIONS OF GLANDERS IN DIFFERENT STAGES.

with the skin nor with the marks that appear upon it. The opening of the lachrymal duct (marked 1) often challenges observation by being well defined and particularly conspicuous; but that natural development does not concern him; to that no attention must be given. The inspection must be concentrated upon the membrane (marked 2) more internally situated than the skin seen at the commencement of the nos-

trils. The skin, moreover, suddenly ceases, and is obviously defined by a well-marked margin; there is, therefore, no difficulty in distinguishing the membrane by its fleshy and moistened aspect, as well as by its situation. If, on this membrane, any irregular or ragged patches are conspicuous, if these patches are

FIG. 5.



EXAMINING THE NOSTRILS.

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becomes more copious and the breathing is impeded. Thus the difficulty of respiration is increased, just as the condition of the lungs renders the necessity of pure air the more imperative. Ultimately, however, laborious breathing induces congestion of the brain, and the wretched sufferer falls insensible, it is hoped, to die of actual suffocation.

SHEEP in parts of New Mexico are worth \$1.25 per head.

Byron Jackson's Horse Fork.

Among the prominent exhibitors of agricultural machinery at this year's fair, Mr. Byron Jackson, of Woodland, Yolo county, will be noticeable. He has a line of harvesting machinery of his own invention and manufacture which is very varied in its application and a credit to the home manufactures of our State. During this year's harvesting, his appliances have been widely used and have given good satisfaction, according to all accounts we have heard.

We have formerly given engravings of Mr. Jackson's feeding and hoisting apparatus as applied to threshing, and on this page we give a cut of his new light-weight horse fork, which commends itself on sight for simplicity and lightness combined with strength and capacity. The following description will perhaps make its design more plain: It is neatly constructed of a light frame, the head formed of two pieces, one each side of the frame, the tines passing through them and the several pieces of the frame, locking the frame firmly between them, and by means of a light iron brace from each tine to the frame. The strain in lifting the load is brought to bear straight with the grain of the wood in the several pieces of the frame, having no twisting strain on any portion of the fork, the two head pieces serving only to space the tines and stiffen the frame. The latch spring is protected so that it never fails to do its work. The bail is so protected by the frame that it is not subject to being bent out of shape, and is made very light.

"In short," says Mr. Jackson in his circular, "this Fork is constructed upon common sense scientific principles, and every ounce of weight left out that is not needed, weighing only 35 to 40 pounds; while those now in use weigh from 60 to 75 pounds."

An advertisement in another column announces Mr. Jackson's Woodland shops for sale. We are not informed of his object in selling. It may be that he thinks some other point may be better for his especial business. His machinery and arrangements are excellent, and Woodland is a stirring town in a rich and progressive county.

RIPENING GRAPES OFF THE VINE.—M. Polacci has lately investigated the disputed question whether grapes separated from the plant undergo an after-ripening, as is the case with apples and pears. Several kinds of unripe grapes were cut off with scissors, and three portions formed of each kind. One portion was then taken, and its quantity of sugar and acid determined immediately. Of the two other portions one was placed in shade, the other in sunshine, and after ten or twelve days the same data were procured. It appeared that there was a small increase of sugar and decrease of acid, and the differences were greater in the case of the grapes exposed in sunlight than with those kept in shade.

THE LOS ANGELES HORTICULTURAL FAIR.—The September number of the *Southern California Horticulturist* brings renewed assurance that the preparations for the Los Angeles fair, beginning October 14th, are going rapidly forward and wide interest is being awakened both among visitors and exhibitors. Arrangements are being made for excursion trains from San Francisco southward at reduced rates, and excursion rates will probably also be established by water. This will give California a splendid chance to visit her charming southern city and witness the many indications of her agricultural progress.

THE DRAKE'S BAY COLONY.—The enterprise of opening Hon. J. McM. Shafter's fine Marin county property, by the organization of the Drake's Bay Colony, is going forward with energy. We have received from the Immigrant Union, at 230 Montgomery street, San Francisco, a copy of a pamphlet, entitled "All About California," which, in this edition, gives especial attention to Marin county. All interested in the Drake's Bay enterprise should send for this pamphlet.

CHANGE OF A WORD.—The writer of the article on "Mortgage tax question," in the *PRESS* of Sept. 7, wishes to change the word "interest" to "taxation," as it occurs in the closing sentence of the third paragraph of his article.

In New Mexico they thresh wheat by driving sheep over it.

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ALPHABETICAL CATALOGUE

—OF THE—

13th Industrial Exhibition of the Mechanics' Institute, San Francisco, 1878.

EXPLANATION.—The Pavilion is divided into 26 sections, indicated by the alphabet, viz.: A, B, C, D, etc. Also into nine divisions commencing with one, which embraces all exhibits along the Eighth street side wall. Divisions 2, 3, 4, 5, 6, 7, 8 and 9 range through the Pavilion from west to east, each section and division being separately indicated by the letter, which may be found near the ceiling on each side of the Pavilion, and under the galleries.

THE FIGURES are at the ends of the Pavilion and galleries.

THE ITALIC LETTERS denote that the articles described are located in the galleries.

PICTURES and articles in Rooms 1, 2 and 3 in the Art Gallery are enumerated in another Catalogue.

NAMES AND EXHIBITS. LOCATION.

Ackerman Bros., Vienna Bent Wood Furniture. 3 V

Adams, A. P., Compressed Coffee. 4 L

A patent process by which browned and ground coffee is rendered impenetrable to air, thereby retaining its aroma and strength in full, besides being so readily prepared for use, and clearing itself at once without adding anything for that purpose. Manufactured of the best berry the market affords, it is pure coffee, and its use is never discontinued, when once commenced. Uniform strength and flavor is obtained by using it according to directions, and its economy is testified to by hundreds of large establishments that now use it. Depot, No. 51 Fremont street, S. F. Send for circular.

Adams, L. D., Patent Car Conpler Model. 7 O

Ainsworth, D. H., Fire Kindlers. 1 J

For economy, neatness and dispatch, this little wooden invention is as much to be applauded as its simplicity is to be admired. It consists of an arch or grate of little pine slats, about 5x6 inches in size and two inches high, the under edges of which are soaked in a resinous substance. Placing this in your grate it holds the coal or wood up nicely, so as to allow free draft, and the resin takes fire at once from a match or other flame, and your fire is as surely built as though it had been started by an incendiary with coal oil rags. It is put up in crates of 100 kindlers each, and sold at \$1.25 per crate, by D. H. Ainsworth, manufacturer and sole agent, No. 770 Bryant street.

Allen, Mr. (Allensdale), ass't of Grapes. 4 V

Appleton, Mrs., Spray Work. 3 F

Arnold, N. S. & Co., Spiral Pipe, Adjustable Elbows, Files, Nuts and Bolts, Pipe Cutting Machines, Decorated Toilet Work. 6 G

Armstrong & Smith, Ale, Porter and Cider. 6 K

Arsher, J. M., (San Diego) Cal. Bananas. 4 V

Atkinson, G. T., Turning Lathe and Fancy Turned Articles. 6 W

Bachelder Mfg. Co., Napa "Iron Clad" Self-regulating Windmill, Iron Tray Wheelbarrows. 4 Y

This self-regulating wheel is one of the most valuable among the many improved windmills. It is simple and compact, and of great power, as the whole of the face of the wheel is filled with fans, and the slats composing the fans are of unusual width at the outer circumference, and built on what is called the "gain twist" principle. The oil fountains are protected from dust, and the stroke is adjustable. It is a very light, free-running mill, running in winds that are insufficient to start many others. In a gale the wheel adjusts itself to the force so as to present less surface to the wind, thus regulating themselves to an even rate of speed. Address Bachelder Manufacturing Co., Napa City, Cal. Bailey, Thomas & Co., ass't of Wool. 4 V

Balmy, A. J., Ostrich Feathers. 3 B

Baker & Hamilton, Clampon Mower, Jackson's Light Weight Horse Fork. 2 Z

Beamish, P., Gents' Furnishing Goods, Mrs. of White Shirts. 5 L

Bequette, D., Plans for Mill Building. 7 M

Behrendt, H. & Co., Trunks, Valises, Satchels and Bags. 2 X

Benjamin, Henry A. & Co., Seltzer and Congress Water. 4 J

These springs are situated in the Coast Range of mountains, eight miles southwest of Santa Clara. The analysis of these waters show them to possess wonderful curative powers, not excelled even by their celebrated Saratoga, N. Y., namesake, or imported German seltzer. Physicians of San Francisco prescribe them to their patients in preference to any other mineral waters. They are in constant use as a beverage in all first-class saloons. Depot, No. 162 New Montgomery street, cor. Howard, S. F.

Bidwell, Gen'l. John, Apples, Peaches, Pears, Plums, Figs, Wheat, Barley and Oats, Dried Fruits, Almonds, Corn, Squash, Watermelon, Chinese Polo Qua Oranges, and Egg Plant, etc. 4 V

Biglow, A. T., first Rice raised in Cal. 4 V

Black, H. M. & Co., Coupe, Family Carriage, Rockaway, 3 Top Buggies, 2 Buggies, open; 1 Child's Coupe. 0 2

Blakeley, Edward, S. F., Mixed Dyes. 7 N

Blockman & Cerf, 1 X L Limestone and Lime. 4 V

NAMES AND EXHIBITS. LOCATION.

Bloom, Samuel, Tanned and Colored Sheep Skins. 1 H

Blowers, R. B. (Woodland, Cal.) Black Hamburg, Zinfandel, Flame Tokay, Rose Pern and Blk Malvoisie Grapes; Muscatel Godo Blanco Raisins, Dried Pears and Apples. 4 V

The very excellent display made by Mr. Blowers, of both green and dried fruit, deserves special mention. His raisins have taken the place of the imported article, and are preferred by all families; and he is still further improving his dried fruit products by the use of the fruit drier invented by him, which has taken premiums without number. Mr. Blowers has recently experimented with the Mofford process, and the beautiful specimen box of dried or preserved prunes is the result, which is very flattering to his skill as a first trial.

Boca Brewing Co., Boca Beer. 6 J

Berry & Place, Double-Acting Steam Pumps, Self-Feeding Rock Drills, California Windmill and Model. 8 J

Berryman & Doyle, Wellington Coal. 4 X

Best, Daniel, (Albany, Ogn.) Pat. Adjustable Washing Machine and Clothes Wringer. 6 R

This machine consists of an endless slotted belt, running around two rollers, with a series of smaller rollers above to press the clothes down upon them. These latter are retarded by a brake, which causes them to rub the clothes as they pass through, very much as they would be on a wash board by hand. The water is alternately pressed from one part of the clothes while the other parts are again being wet, and they finally leave the machine drier than wrung by hand.

Bofinger, J., Metal Spinner. 8 X

Bowdoin, L. M., Vermin Fumigator Kitchen Cabinet. 4 Q

Borkheim, H., Gents' Patent Drawers. 2 B

Bothin, H. E., Mrs. Mills' Cream Yeast Powder. 5 V

Boudoin, L. M., Rotary Top Kitchen Cabinet Tables. 4 Q

Bowen B. os., Premium Yeast Powder. 5 V

Bradford, J. B. (Courtland, Sac. River) 3 Bottles Port Wine. 4 V

Brehm, R. W., Turning Lathe, Fancy Turned Articles. 6 V

The beauty of these articles cannot be described. It is only by seeing them, after having passed through the turning and polishing at the skillful hand of Mr. Brehm, that the beauties of the grain of our Pacific coast woods can be appreciated. Nearly every article of virtu that can possibly be made of wood, is turned and exhibited by Mr. Brehm, such as sleeve buttons, napkin rings, bouquet cups, thimble cups, vases, cane-heads, breastpins for pictures, etc. At his factory, on northeast corner of Mission and Main streets, he does a general wood-turning business, and other wood ornamentation.

Brown, G. T., Improved Hay Carrier. 6 Z

The above entry gives but little idea of what this machine is capable of. It is a hay-fork and carrier combined. Most of the hay-forks have to be attached to several different places during the operation of filling a barn, but this invention is a carrier, and when once up runs from end to end of the barn like a thing of life. It travels on a five-eighth iron rod, and drops the hay at any desired point. It can also be used to take hay out of the barn or for stacking and loading in the field. They are furnished on trial to responsible farmers, or sold, by G. T. Brown, Stockton, Cal.

Bryant, Dr. F. G., Pat. Fire Escape. 5 C

Briggs, J. W. (San Jose) Hungarian Plums 4 V

Brown Mrs., Patch Work Quilt. 1 P

Britton, John (San Jose) Dried German Prunes. 4 V

Brown, Chas., Ranges, Stoves, and Tin ware. 2 C

Brown, Dora, A. (San Leandro) Silk Bed Spread. 1 U

Browell, John., Pat. Chimney Flues and Tops. 9 E

Burr, C. H. & G. W., Weather Strips. 7 U

It is claimed by all the leading architects in the United States to be the best and cheapest, and the only weather strip that will keep out the dust, drafts or rain, and stop the rattling of the sash. It is used instead of the old parting-stop in the windows, the rubber side pressing against the sash—thus making it perfectly air tight, the strips being out of sight. It does away with nailing, and does not interfere with painting, oiling, varnishing, or putting in your window screens. No. 667 Mission, near Third st.

Burton, W. H., Awnings. 2 A

Burton, Mrs. W. H., Bird Cage Awning. 3 A

Bush & Scudder, Sanitary Good Sinks, Water Closet Filters, Bath Tubs, etc. 3 Y

Burrage, C. R., California Root Tea. 3 N

California Furniture Co., Parlor, Bed-room and Settee, Win low Drapery, etc. 2 Z

The parlor and bedroom sets shown as above are peculiarly neat and substantial, and indicative of an ability to turn off any kind of work desired. Running a large force of hands and possessing peculiar facilities for economical working, and being a pioneer in furniture manufacturing on this coast, this company can fill orders for large or small lots of furniture, plain or ornamental, at the shortest notice. Office and factory, Nos. 220 and 226 Bush street, and 649 and 651 Market street.

Cal. Bellows Mfg. Co., Sides of Leather and Bellows, assorted sizes. 8 G

Cal. Paint Co., Averill Mixed Paint, Copper, Plumbago, and China Gloss Paint. 3 R

The whole secret of the superior excellence of the Averill mixed paints, manufactured by this company, lies in the superior qualities and absolute purity of the chemicals used, lead, oil and zinc, and the fact that they are thoroughly

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ground and incorporated with water glass, or silicate, which has the effect of more closely uniting the lead and oil, or rather enabling the oil to hold the lead in solution, and making it less liable to be affected by weather. Tin, coated with this paint, can be repeatedly bent back and forth without cracking or loosening the paint. It is economical and durable. Sales-room, No. 329 Market street, San Francisco.

Cal. Paper Co., Print Paper, Straw Wrapping Paper, Hardware Paper, Straw Board and Barrel Board, Butter Paper. 7 S

This company make a fine showing of home-made paper that is competing in our market with the Eastern article. The factory is located at Stockton and turns out four tons straw wrapping paper, and about eight tons printing paper per day. They also make about two tons straw board and tar board for barrels and book binders' use. Egbert Judson is President, and E. T. Cooper, Secretary. Office, No. 10 California street, San Francisco.

Cal. Spring Bed and Mattress Factory, Crandall Spring Bed and Mattresses. 4 L

Cal. Wire Works, Wire Goods of every description. 3 F

California Raisin and Fruit Company, Apples, Pears, Plums, Prunes and Peaches, preserved by Millford Process. 4 V

California Electrical Works, Telegraphic Instruments, Fire Alarm Apparatus, Electric Bells, Burglar Alarms, Electro-Medical Apparatus, Induction Coils, Geissler Tubes, Samples of Gold, Silver, Nickel and Copper Plating and Electro-Bronzing. 5 K

Attention is specially recommended to Nickel plating, a patent process, the exclusive right for which on this Coast being held by this company; also, silver plating copper plates for mining uses. The specimens exhibited, 4x6 feet, being the largest single plate ever turned out on the Coast. Another article worthy special notice is the Magnetic Blasting Apparatus. The office and works of the company are at 134 Sutter street, San Francisco.

Campbell, W. H., Eucalyptus (Rheumatic) Oil, Preparations of Eucalyptus. Garden

Cantel, Mrs. H., Laces Cleaned. 2 B

Carvill Man'g. Co., Hacks, Conpes and Buggies. 2 R

Church & Co., Horsford's Bread Preparation. 4 E

Choynski, I. N., School Furniture, Old Books and Stationery. 1 3

Chronicle, S. F., Stereotype Plates. 1 E

Cillegan, W., Large Mushrooms. 4 V

Ciphers, D. S., Pop-corn. 6 D

Clock, A. (Napa) Hops. 3 V

Clark, G. W., Paper Hanging and Wall and Window Decorations. 1 B

Clark, T. S., Iron Bedsteads and the Union Wire Mattresses. 4 P

Mr. Clark also exhibits Bowdoin's patent rotary top kitchen table, that is a labor saver for the cook and housewife, and even old bachelors would find it the next best thing to a wife in the kitchen. The top rotates upon a pivot in the corner, swinging around, supported by a hinged bracket that folds into the end when not in use. As the top moves around the molding board is exposed to view, and sliding it to one side or the other exposes the flour or meal. All the partitions can be taken out to clean it, and it has a shelf above for lamps, etc., and one below for pots, bread-pans and kettles. The legs are detachable for convenience, in case of moving household goods. No. 767 Mission st.

Coe, O. R., Mann's Reactionary Lifter and Fairbanks' Scales. 3 I

Coldwell, Mrs. G. W., 2 Rag Mats. 1 Q

Collier, W. B., Camp Folding Stoves. 1 Q

Colombo (Italian) Market, Vegetables. 4 V

Conrad, D., Peanuts, Walnuts, Hard and Soft Shell Almonds. 4 V

Cook, H. N., Belting and Hose. 7 W

Cooper, & Co., Floroscopes and Optical Goods. 3 F

Corville, Emerson & Co., Canned Salmon. 3 U

Cotter, Mrs. F. G., Chemically Preserved Fruits. V 4

Covert, H. M., Single and Double Sack Holders. 8 R

Cox, T. & W., Bird Feed and Gravel, Gold Fish Food. 3 V

Crosby, G. S., Self-Raising Bread Preparation. 4 E

Cunningham, G. L., English Bicycle. 6 X

Curtaz B., Upright Pianos, Square Pianos and Organs. 1 V

Cutting & Murray, Falk's Milwaukee Beer, Swan Ale, Woman Suffrage Stove Polish, McLaren Mills Oatmeal. 7 J

Campbell, W. H., Boiler Composition and Eucalyptus Oil. 9 S

Carlson & Currier, assortment of Sewing Silks and Embroidery Silks. 3 E

Carlson & Currier are successors to W. S. Brown & Co., agents for Belding Bros. & Co.'s machine twist sewing silk, etc., and Warrin's needles. At number 569 Market street, San Francisco.

Cattarini, E. J., Watermelon. 4 V

Daggart, John, Klamath Mine Quartz. 6 L

Daniels, John, Granite and Marble Mantles. 1 H

Danicheff, Glove Factory, Glove Material, Gloves and their Manufacture. 2 Y

Dannensbaum, M. R., Millinery Goods. 2 C

Davis Bros., Fancy Goods, Plated Wares, Leather Goods, Clocks, etc. 5 J

Davis, Geo. A., Agricultural Implements, Plows, Rakes, Cultivators, Mowers, etc. 2 Z

Davis, Horace W. & Co., Crushed and Hulled Wheat, Flour 4 brands and Graham Flour 4 V

Davis & Crowell, Lime and Limestone. 4 V

Day Bros. & Co., Incubator. 6 V

Deaves, C., Wood Engraver. 1 I

De Courcy, E., 2 Ironing and Polishing Ma-

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chines. 8 L

An immense iron, heated by gas or otherwise, and being reversible, having only an oscillating motion, while by an ingenious combination of mechanical appliances the board carrying the garment travels back and forth or is stationary at will under the iron. Depot, 140 Sixth st., S. F. Delisdiwere, Mue., Hair Restorer and Cosmetics. 2 B

Denniston, E. G., Silver Plated Wares, Large Amalgamating Plates, Copper—Silver Plated. 5 O

Unless expressly so stated upon the exhibit, visitors would be loth to believe that the replated ware in Mr. Deniston's display was aught but new. That he is an adept in his business of plating, we can aver, as we have had his work. The large copper plate he exhibits, silvered for amalgamating purposes, shows what he can do in that line, and his amalgamating plates are favorites with all the mining superintendents. At 653 and 655 Mission street, he does a large business, and has ware of all kinds on sale.

Detrick, E. & Co., Pens, Bags, Awnings, Awn-ing Goods, and Sewing Machines. 4 E

The display as above, in the fair, is very fine, and embraces both their useful and ornamental manufactures. Nothing can be better adapted to out door life than their camp equipments of tents, tables, chairs and beds; and their establishment on Clay street is a surprise to any farmer or aristocrat, for utility, beauty, comfort and luxury are all in turn served in the manufacture of their goods. Manufactory and depot 123 Clay street, San Francisco.

Dewey & Co., Mechanics' Fair Daily, Bound Files of the Mining and Scientific Press and Pacific Rural Press, Samples of Pat. Elastic Newspaper File Holders, Bound Volumes of the Mechanics' Fair Daily. 6 R

Dewey, Mrs. R. E., Hand Knit Counterpane. 1 T

Dinmore, Mrs. Samuel, Bouquet of Paper Flowers. Art Gallery

Doble, H., Steel and Cast Steel Tools, and John Wright's Picks. 9 G

Dodge, C. H., Oriental Pearl Renovator and Cement. 3 Q

Dodge & Pierce, Amateur Printing Presses and Sample Cards. 5 P

As a matter of amusement to those who can afford it, and to others as a matter of convenience, the printing presses and accompaniments, exhibited by this firm, are invaluable. Such improvements have been made in the amateur presses of late as to render them quite efficient, and those exhibited possess peculiar adaptability for their work, being simple, cheap and effectual. This firm import and keep on hand elastic rubber printing stamps, card stock, printing presses and material, and all kinds of note paper, envelopes, tags, etc., at No. 22 Kearny street.

Donoghue, Mrs., Cosmetics and Toilet Articles 1 Y

Doran, Mrs., Log Cabin Quilt. 1 N

Deppen, Mrs., Fine Embroideries. 1 V

De Ronceray, L., & Co., Display of Pictorial Advertising Cards. 1 L

Dreyf, oos'Prof. H., Penmanship. 3 E

Duffy, T., Rustic Work. Garden.

Beautiful in design and excellent in workmanship are the rustic articles in wood and concrete exhibited by Mr. Duffy. His grotto is fancifully decorated and would be an ornament in any garden, and a comfortable retreat on a hot day. Of shell-mounted vases and pillars he shows several unique and pretty patterns, and for rustic wood work, comprising chairs, settees, flower stands, arbors, trellises, etc., he has few equals. His aquariums and ferneries are solidly built and ornamental in pattern. He has built up quite a business since his first exhibit three years ago, and the encouragement he receives has had its effect in the increased beauty of his work. He is also an upholsterer, and has his place of business at the corner of Leavenworth and O'Farrell streets.

Dunn, H. D., Students' Lamps, Students' Slide Lamps, Students' Hanging Lamps, and Glass Night Lamps. 7 N

Eaton, Chas., Estey and Holmes Organs, Hazeltown Bros. Upright and Square Pianos. 4 W

Engine, The Pavilion. 9 R

The great engine that runs the machinery of the fair, is now the property of the Mechanics' Institute, but was built by the Fulton foundry, which has special facilities for work of this kind. It is of 128 horse-power, 18-inch cylinder, 36-inch stroke, 16-foot fly wheel, making 65 revolutions per minute, and fitted with Hendy governor and Meyer's adjustable cut-off. Messrs. Huickly & Co. are noted for large work of this kind, and for marine engines, mining and mill machinery, sugar machinery, etc. Their works are on Fremont and Howard streets; office 213 Fremont street.

Falkner, Bell & Co., 8 kinds of Wool. 4 V

Finley, R., Dr. Wolcott's Pain Paint, Catarrh Annihilator. 3 P

Wolcott's Pain Paint and Annihilator has no equal for the cure of catarrh and colds in the head, nervous headache, toothache, etc. It relieves almost any kind of pain, no matter where seated, in a few minutes, and freely applied is exceedingly beneficial in palpitation of the heart, dyspepsia, affections of the kidneys, neuralgia, rheumatism and asthma, and has effected some remarkable cures in these as well as female complaints. It is composed of herbs, barks and gums. Send for circular or the medicine to R. Finley & Co., 1023 Market street, S. F.

Fenn, F. G. W., Gold Dust Polish. 3 P

Fenn, F. C. M., Beef Cutter and Vegetable Slicer. 9 W

Fenn's improved dried beef cutter, vegetable slicer and bread cutter, superior to anything before the public for a century back. Indispensa-

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ble for families, lunch saloons and hotels for economy and convenience. Though in the market but a few years, a favorite with every one. No family should be without one. For sale at the Fair until it closes. Depot, 423 Washington street, San Francisco, Cal.

Fish, A. L. & Co., Apple Grinders and Cider Press, Steam Fire Engine. 6 A

Boomer and Boschert Wine and Cider Press, the simplest, most economical and powerful press in use; Knowles' Patent Steam Pump, for pumping water for farming, mining and all purposes where water is used; Clapp and Jones Steam Fire Engine, Waters' Steam Engine Governor, Ferris' and Miles machine tools, Rider Pat. Cut-off Engine, Union Rock Drill, Air Compressors, Stationary and Portable Engines and Boilers, new and second hand, for sale by A. L. Fish & Co., 9 and 11 First street, S. F.

Fischett, Mrs. S. D., Turkish Rug. 1 Q

Flynn, John, Horse Shoes and Spurs. 9 J

Follansbee, Geo. S., Follansbee Pump Co.'s Patent Double Propeller Pump. 8 M

DOUBLE PROPELLER PUMP.—The attention of visitors at the Mechanics' Fair has been directed to the Follansbee Double Propeller pump by the enormous and continued stream it pours forth. It is one of the most powerful lifting pumps ever put before the people, and is so simple that any one can see at a glance what its capabilities are. It requires no oiling, and any one of them over six inches in diameter can have an engine attached direct and thus avoid the use of belting, which makes invaluable for wrecking purposes, pumping water out of vessels and irrigating and draining work. It will be on exhibition at the State Fair also, and the agent or the Follansbee Pump Company, Boston, Mass., will send circulars and furnish pumps of any size. Manufactured at Golden State and Miners' Foundry, First street, San Francisco.

Foster, S. & Co., Condensed Eggs and Mince Meat. 5 Q

Forest, C. T., Glass Ball Castor (Parent's Patent). 4 U

Freeman, Mrs. M. L., Rag Rugs. 1 W

Fromberg, E., Toy Telephones. 4 E

Frutling, W., Gang Plow. 2 V

Garratt, W. T. & Co., Bells, Globe Valves Steam Gauges and Whistles, Oils and all kinds of Brass Goods, Steam Traps, Hooker Patent Steam Pumps, Water and Gas Gates, Portable Engine and Boiler, Brass Cannon. 8 L

But brief mention is made of the full and fine display of brass work, etc., by this firm. Agents for Loneragan's patent oils and lubricators, they exhibit a fine show case of the many different styles of these valuable inventions. They are also agents for S. L. Jones steam traps, without which no engine is complete. The iron shell flanged Globe and Chuck Valves exhibited are finished to such a degree of perfection as to lead many to suppose them to be nickel plated. Steam whistles, gauges, low water alarms, Hooker's pumps, and everything in the line of brass foundry and fittings is furnished by this firm, at their establishment, Nos. 138 to 142 Fremont street, San Francisco.

Getz-Lucas, Madame Anna, Wax Fruits. 1 K

Georgiani, A., 3 kinds of Pears, 4 kinds of Apples, Oranges, Cocoanuts. 4 V

Giant Powder Co., Hercules and Giant Powder. 4 I

Gilbert & Moore, Eureka Kitchen Tables, Patent Folding Table, Iron Bedsteads, Morton's Patent Desks, Writing Tables and School Furniture. 4 T

Giovani, Daniel, Charcoal. 1 K

Given, John, Wheat Samples. 4 V

Gladding, McBean & Co., Sewer Pipe, Chimney Pipe and Taps. 8 F

Gladding, McBean & Co., manufacturers and dealers in vitrified iron stone sewer pipe, terracotta chimney tops and flue pipe, fire brick, fire clay, etc. San Francisco—213 Market street, 1310 and 1312 Market street, 15 and 17 McAlister street. Oakland—1170 and 1172 Broadway. Manufactory at Lincoln, Placer county, California.

Globe Gaslight Co., Globe Gas Burner, Shaler's Patent Safety Cans, Shaler's Self-Generating Carbureters. 7 Y

Goldman, A., Cements, Lucine Oil, Laundry Liquid Blue. 3 T

Golden Gate Fruit Packing Co., (San Jose) Preserved Fruit. 4 V

Goodrich, Taylor, Ranges, Stoves, Oil Stoves etc. 2 M

Goodnough, A. M., Bradbury Pianos, and Smith's American Organs. 3 I

Gordon, James E. & Co., Show Card Handles, Weather Vanes, Locks and Axes, Chain Forge and Tools. 5 P

No more interesting exhibit has ever been made in the fair than that of this firm. The chain forge has always attracted much attention and every one leaves satisfied that the chain is first-class as to quality of iron and workmanship, and its use demonstrates the correctness of the verdict. They also make a fine display of other goods as above mentioned, besides many ornamental weather vanes. Their exhibit, though large, gives no adequate idea of the manner and variety of the hardware kept by them at Nos. 254 and 256 Market street, and 8 and 10 Front street.

Gordon, Mrs. H. E., Crochet Bed Spread. 1 V

Grave & Co., Coupe, Oppenheim Buggies finished, Oppenheim Buggies with Tops, Oppenheim Buggies inlaid Cloth, Business Wagon. 2 T

The interesting exhibit of vehicles made by this firm deservedly received many flattering encomiums, and attracted much interest from visitors in general. The Oppenheim buggy is

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the most convenient form of carriage the man of moderate means can possibly have, as it can be instantly transferred from a single seated buggy to a double seated carriage, and back again at pleasure. All styles of buggies, phaetons, carriages, hacks, coaches and wagons are manufactured by them, and their exhibit hardly samples their stock. Excellent work, good material, and fine finishing are specialties at their factory, Nos. 421 and 423 Pacific street.

Grant, D. W. & Co., Tubular and Angular Harrows. —

Gray, M., Steinway Pianos, Grand, Square and Upright, Brass and Stringed Instruments. 1 Y

Gump, S. & G., Mirrors, Pictures, Easels, Frames, Tables, etc. 4 N

Gutta Percha Rubber Co., Hose Belting and Packing. 7 Q

Hager, Mrs. J., Specimens of Hand and Machine Sewing without Attachments. 1 U

Hammam Baths, Turkish Kiosk. 4 Q

Hallidie, A. S., Wire Ropes, Cloths Netting, Wire and Wire Goods, etc. 3 D

Halpruner, Dr. W. S., Patent Healing Salve. 3 R

The day is past for hiding one's light under a bushel, hence Dr. Halpruner exhibits his healing salve for corns and bunions with good effect. It has wonderful healing properties, and is guaranteed to be a sure cure for corns and bunions, those toothaches of the feet and excruciating inquisitors of the nineteenth century. The specimens of excrescences removed by the doctor, which he exhibits, are sufficient proof of his skill, and once in his possession it is hard to see how they will ever get back upon human feet again. At his office, No. 906 Market street, he operates painlessly on hundreds daily, to the neglect of his stand in the gallery.

Hammer, L. K., Chickering Pianos. 3 E

Hansen, J., Patent Railroad Grip. 1 N

Hansen, Richard C. & Co., Blocks, Lignum Vitæ, Patent Sheaves, Steel and Brass Patent Bushes. 7 U

Ship captains and mining superintendents seem specially interested in the exhibit made by this firm of double strap blocks, sheaves and bushing. They make a specialty of all steel point bushes for mines and mining pumps, and from the specimens of work exhibited, understand their business. They import all kinds of bushings and gearings and manufacture them, and blocks and pumps, and put them up at short notice. Manufactory and office, No. 9 Spear street, near Market, San Francisco.

Hartman & Freese, Oscillating Swings. 2 B

Hause, R. W., Photographs. 1 N

Haver, P. J., Band Saw, Fine Sawing. 8 Q

Haverside, John, Silver Plating and Cleaning Fluid. 3 H

Hall, E. L., Rustic Work. Garden

Hawkins & Cantrell, Patent Elevator. 8 O

Hawley, D. N., Agent, Upright Monitor Engine, Archer Rake, Meyers' Gang Plow, Newton Wagon, Howe's Dormant Scales, assortment of Scales. 7 Y

In addition to the above, Mr. Hawley is agent for Howe's Standard scales, Myers' Excelsior gang plow, Archer's O. K. and Reindeer Sulky rakes and a general assortment of agricultural implements, Nos. 201 and 203 Market street, San Francisco.

Harvey, Mrs. Julia, Beanmondaire. 3 R

Hall, C. R., Upright Pianos. 2 Z

Harlow, Mrs., Crochet Bed Spread. 1 U

Hartshorne & McPhun, Window Shades, Opaque Shades, Holland & Hartshorne's Self-Acting Shade Roller. 4 G

At their large factory on the corner of Bluxome and Fifth streets, this firm manufacture every variety of window shades and opaque goods for similar uses, and sell to the trade at Eastern prices. Their line of dwelling-house shades, either plain, stick or with fine gold border, lettered or plain, store shades and general opaque cloths cannot be excelled. House fitting a specialty with them. At their store, No. 112 Fourth street, they have on hand a fine and well selected stock of carpets, oil cloths, matings, cornices, window lace, shades and shade material, etc.

Hawley, Marcus C., Taylor Rake, Cider Press, Separator, Corn Sheller, Subsoil Plow, Deere Plows, Reapers, Wagons, Scott Engine, Lawn Mowers. 6 Y

Hayes, D. D., Fire Escape Truck and Hose Clamps. 7 W

Heald's Business College, Telegraphic Instruments and Apparatus. 4 D

Hermann, P. A., Improvement on Carriage and Wagon Wheel. 2 W

This improvement consists in a metal clamp enclosing the felloe at the point of junction of the spoke. The clamp is perforated to admit the passage of this spoke tenon, and is riveted through the felloe, and strengthens it and prevents its splitting, also. The wood of the spoke, receiving the jar and strain of all shocks endwise of the grain presents greater resistance to such pounding than the felloe, which receives this pounding crosswise of the growth, and consequently the latter gives to the shock. This metal clamp protects the felloe from this action.

Address Peter Hermann, 35 Post street, S. F.

Heinz, Mrs., Bed Spread. 1 P

Heinze, L., Blowing Table, Blown Glass, etc. 3 S

Hendy, J., Ore Feeders. 8 L

Hemme & Long, Upright California Manufactured Pianos. 3 P

Hepburn, Ward A., Proctor & Gamble's Soaps and Candles, Dooley's Yeast Powder, J. J. Gilbert's Starch, Fields & Evan's, Day & Co.'s Oysters, Frazer's Axle Grease, Lima Beans. 5 U

In addition to the above entered articles, Mr. Hepburn is agent for Lunt's arena, or

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oaten grits, Troxell's soap, American condensed (Alderney) milk, Allen's tinted cavendish tobacco, Arbuckle Bro.'s Arioso coffee. He is engaged in a general forwarding and commission business, and purchasing agency, for which he has unusual facilities and advantages, having an extensive and long acquaintance with sources of supply and avenues of consumption on this coast and foreign ports. Office, Nos. 309 and 311 Sacramento street.

Herman & Sexton, Self-Supporting Sewer. 7 N

Hess, Lewis, Damiana Bitters, Fluid Extract. 7 M

Hill, Samuel, White, Florence, Peerless, New Home, Weed, Hill, Wardwell, Dauntless and California Sewing Machines, Florence Oil Stoves. 3 H

For nearly 20 years in the sewing machine business on this coast, Samuel Hill knows more about them than any other operator in the State. Of late years he has been concentrating the trade, and now controls several of the best machines to be had in the market. Among these are the improved Florence, New Home, Dauntless, White, Weed Improved, Peerless, California, Wardwell, and one named after himself, The Hill. Perfectly fair and honorable in dealing, patrons can rely on his recommendations in purchasing machines, as his judgment and experience are invaluable. Office, No. 19 New Montgomery street, Grand Hotel Building, San Francisco.

Hill, Mrs. M. E., Rugs made from Rags. 3 P

Hinckley, C. D. & E., Star Clipper Spring Beds. 4 M

Hickson, Just & Co., 2 kinds of Peaches, Hungarian Prunes, Coe Golden Drop Plums, Petite Prune de Agen. 4 V

Hickey, Mrs., P. W. Sea Moss, Shells, Skeleton Leaves, Wool and Wax Work. 1 L

Holbrook, Merrill & Stetson, Ranges, Stoves, Japan, Granite, Perfection, Nickel-Plated and Tinned Wares. 2 J

Hook, E., Dining and Kitchen Tables. 3 J

Hopkins, Taylor & Co., Atmospheric Copying Press. 3 P

Hottua & Hanson, Buggy. 2 X

Hume, R. D. & Co., Magnolia Hams, Aurora Beer and Salmon, Canned Goods, etc. 5 S

Hutchinson, James, Plants and Flowers, Garden Huntingdon, Hopkins & Co., Exhaust Fan and Cupola Blowers, Rider Compression Engines, Forge Blowers. 8 Q

Hutchings, J. M., Cabinet made of California Woods, Cones and Seeds of Big Trees, Bark and Chips of Big Trees, Picture of (Dead Giant) Tree. 4 V

Jackson, R. W., Abalone Shell Jewelry. 4 P

Among all the beautiful shells that have from time to time been utilized for purposes of ornamentation and adornment, none can equal the abalone of the Pacific coast. Looking through the beautiful collection shown by Mr. Jackson, one can find almost every shape that may be appropriately worn; leaf, bird, fish, my lady's hand, cross, heads, and even the famous shamrock, are all there found in this beautiful shell, glistening with all the colors of the rainbow, bound or tipped with gold or silver. Cuff, shawl, and breast pins, brooches, bracelets, ear-rings, and cuff buttons, dress buttons, card cases, are all unique and beautiful, rich and durable. His store is located at No. 614 Market street, opposite Palace Hotel.

Johns, H. W., Asbestos Paint and Roofing. 8 H

The display of asbestos materials by this firm embraces asbestos roofing, paints, boiler and pipe felting, asbestos steam packing, asbestos cement, lining felt, board, hair felts, non-porous felts, etc., from their establishment, No. 5 First street, San Francisco. A valuable fire proof article and non-conductor for steam pipes and boilers, and for inside surfaces. The cement is unsurpassed for stopping leaky roofs.

Johnson, J. C. & Co., Manufacturers of Harness Leather. 4 V

Jones, A. L., Patent Self-Regulating Steam Trap. 8 O

Jones, Wm., Enamelled Tiles, Hand Painted Art Tiles, Encaustic and Plain Floor Tiles, Flooring, Hall and Wainscot Tiles. 9 H

Joseph Bros., Youths' and Boys' Clothing. 2 Y

Journal of Commerce, general display of the Products of California. 4 V

The San Francisco Journal of Commerce stand is without question the leading object of attraction at the Fair. It has been arranged at the special request of the Board of Managers by the Business Manager of that journal—and *multum in parvo* contains in a comparatively restricted space more objects of interest and importance to the coast than has ever been seen in any similar collection. Cereals of all kinds, Corn 18 feet high, Minerals of all kinds, Fruits and Vegetables of the best varieties and of remarkable size and beauty, manufactured and natural products, such as bees making honey, etc., etc.—in succession interest and delight the spectator. We can safely say that more people visit it than any other stand in the Fair.

Jung & Utz, Camelo Bay Coal. 1 L

Kelly, P., Boots and Shoes. 4 O

Kelly, James, Improved Grunsom Adjuster 4 W

Keogh, John, Moss, Feathers, Curled Hair and Upholsterers' Tow. 4 L

Ketchen, J. E., Rubber Printing Stamps. 7 P

King, D. J., & Co., Automatic Fountain Pens. 3 Q

King, Mrs. M. J., Worsted Work Mats. 1 S

Kitzmuller, M., Rockaway, Cabriolets, Side Spring Buggies, Side Bar Buggy, Baker Wagons. 2 V

After considerable expense Mr. Kitzmuller has succeeded in inventing a cabriolet for physicians' use particularly, that is certainly the neatest, handsomest and easiest riding carriage of its kind in the market. The body is low so

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as to give little trouble in entering or dismounting, and at the same time the wheels are high to make it run easy to horse and man. He has on hand several styles of rockaways, buggies and wagons, all of the best quality as to material and finish, and warranted at reasonable prices. Office and workshop No. 850 Howard street.

Knowlton, J. J., Inks and Mucilage. 4 F

Koehler & Ritter, Silverware. 5 O

Kohler & Chase, Decker's Grand, Square and Upright, Fisher's Upright, Emerson's Square Pianos, Mason & Hamlin's Organs, Musical Instruments and Strings. 1 Y

Krutzschmitt, Annie, Bed Spread and Pillow Cases. 1 P

Kuhling, A., Bedsteads and Wire Mattresses. 4 O

Lake H. & Co., Blacking (Shoe). 3 W

Lancaster & Northon, Custom Made Clothing. 2 Y

Landers, R. R., Model of Windmill, Self-Regulating. 7 M

Lansberger, I. & Co., Dr. Henley's IXL Bitters, Dew of the Alps; Champagne. 7 I

Larkins & Co., Coupelets, Ladies' Phaeton, Extension Top Rockaway, Side Bar Rockaway, Sulky, Single Buggy, Piano Box Buggies, Thoroughbrace Wagon. 2 V

Lejeal, J. J., & Co., Steck's Square and Upright Pianos, Sohmer's Square and Upright Pianos. 2 B

Levy, Oscar S., Ranges, Stoves and Glory Reservoirs. 2 L

Lewis, Oscar, Iron Vases and Pedestals, Garden Liddle & Kaeding, Guns, Pistols and Fishing Tackle. 5 J

Liescnfeld, P., Billiard, Bagatelle and Pool Tables, Billiard Goods. 4 F

The billiard salesrooms of P. Liescnfeld, at 585 and 589 Market street, corner of Second, are brilliant with the many beautifully finished tables of different kinds manufactured by him. Sole agent for Phelan & Collander's patent cushion, and the latest patent steel plate and combination cushions. The new Centennial bevel billiard table is unsurpassed, and a full assortment of billiard balls and trimmings always on hand and furnished to order.

Light, W. W., (Sacramento city) Bee Hive and Bees. 4 V

Linthorpe, Rice & Co., Enterprise Windmill, Perkins' Patent, "Blymyre Bells"—Church and School, Fire Alarms. 8 I

Lipman, Mrs. M., Turkish Tidies, Turkish Table Covers, Crochet Tidies, Crochet Spreads. 1 X

Logan, M. H., Hops. 1 U

Lorquin, E. F., Taxidermic specimens. 4 R

Low & Chartrey, Patent Washing Machine. 8 P

Lyons, Mrs. W. J., Log Cabin Quilts. 1 R

Mahoney, W. H. & Co., Hand Painted Tile Flower Box, Marble Top Table. —

Mackey, Lillichio M., Patch Work Quilt. 1 R

Mackey, Alex., Cocoa Matting and Fiber, Rag Carpet and Carpet Wares. 4 K

In addition to the above mentioned articles Mr. Mackey is an importer, manufacturer and large dealer in tapestry and ingrain carpets, oil cloths, mats, rugs, window shades, lace curtains, cornices, etc. Everything in the carpet line can be found at his large and elegant establishment, No. 1110 Market street, where purchasers will find low prices, good articles, polite and immediate attention. Being an old and experienced carpet weaver, Mr. Mackey brings to bear upon his business an amount of practical experience that but few in the trade possess, and can therefore discriminate carefully in selecting his stock.

Main & Winchester, Bridles, Saddles, Whips, Harnesses, Robes, etc. 1 C

Mallon, John, Curved Mirrors, Stained, Bent, Cut and Embossed Glass. 3 L

Manon, Mrs. S. S., Crochet Buggy Robe. 1 Q

Mau, Albert & Co., Teas, Soap and General Ass't Groceries. 3 F

Marion, Henry, Folding Tables. 3 W

Martin, W. H., California Roofing Slate. 4 V

Marwedel, C. F., Mechanics' and Moulders' Tools, Set Screws and Cast-steel Dogs, Foot Lathe. 8 I

Maguire, Mrs. F. M., Tatting and Crochet Work. 1 P

Matthai, R., Turning Lathe and Printing Press. 8 I

McFarland, J. M., Model of Stamp Mill. 7 M

McGuire, Arthur, Ornamental Posts. 4 K

McKibbin & Pettison, Iron Wheelbarrows. 3 Y

These wheelbarrows are very superior in their construction, being made of No. 12 iron, one-eighth of an inch thick, and made on an iron block, while the ordinary patterns are only of No. 16 iron. This firm manufactures railing, stairs, vaults, doors, locks, beams, lintels, bolts, anchors, bedsteads, safes and all kinds of housework, besides a great variety of other wrought iron work of the best quality and improved patterns. The Eureka Iron Works, Nos. 317 and 319 Howard street, between Front and Beale, are very complete in equipments, and work is turned out promptly on orders.

McLean, A. A., Perforated Frictional Belts and Abdominal Support; also, California Elastic Truss. 6 M

Perforated Frictional Belt cures rheumatism, lumbago, paralysis, kidney and liver complaints, female weaknesses, etc. Dyspepsia and all diseases of the bowels permanently relieved. The Abdominal Belt is valuable to ladies in a delicate state, and recommended by physicians and can be had at all druggists or at the general agency, 605 Sacramento street, S. F. California Elastic Truss is the best. Send for price-list of belts and trusses.

McDonald & Johnson, Stylograph. 6 U

McNalley, T., Sacramento River African Musk-

NAMES AND EXHIBITS.	LOCATION.	NAMES AND EXHIBITS.	LOCATION.	NAMES AND EXHIBITS.	LOCATION.	NAMES AND EXHIBITS.	LOCATION.
melon.	4 V	can tell whether the best wool has really been used in the cloths they use. The wool may be fine and long, yet have a weak place in its center that makes it no better than short wool of equal fineness. From his long experience in cloth weaving and working, Nicoll can at once detect this defect, and returns to first hands any goods sent him possessing this damaging material.		opposite Palace Hotel, San Francisco.		Office, No. 61 First street, San Francisco.	
Meat & Fish Packing Co. "Ochsenmaul Salat," (preserved beeves' heads, tongues and palates).	3 T	Importing from the best foreign and domestic factories all the cloths he uses, and having a branch house in London to watch the markets, gives him the advantage of the newest goods, less the profits of two or three intermediate dealers, so that he can afford to sell his goods cheaper than most establishments of a similar nature in this city.		Owens, J. B., Pacific Pottery, Chimney Pipe, Sewer Pipe, Stone and Earthen Ware, and Fire Brick.	9 C	Preble & Co., Pitcher & Palmer Axle Grease.	3 V
Public attention has of late been directed to the ornamental pyramid on the main floor of the pavilion, composed by the nicest glass barrels containing "Ochsenmaul Salat" (preserved beeves' heads, tongues and palates), exhibited by the above named company, whose place of business is No. 736 Montgomery street. This fine delicacy and relish, has but lately been introduced to our State, and already obtains the highest approbation of epicures and housekeepers. No family should be without it, for its convenience in emergencies more than compensates its cost.		Now, coming to Nicoll direct himself, it may be said that if he had not been bred a tailor he would have been a sculptor or an artist, for it requires the same faculty to measure, cut and fit, that it does to shape up in stone or plaster the beautiful rounded limbs of a Venus, or the massive sinewy form of an Hercules. Form is the pbenological term for this faculty, and its possession in a greater or lesser degree is what constitutes the difference in ability in the business we have under consideration. Of course "color" has much to do with it, as assisting the artist either in oil or cloth to harmonize his effects, and suit the complexion of his customers. These two faculties possessed in a large degree, coupled with business talents and enthusiasm for his calling, is what has given Nicoll such a justly wide reputation in the higher circles of the community.		Mr. Owens exhibits a fine assortment of the excellent pottery ware manufactured by the Michigan Bar Pottery, of which he is agent. Jars, crocks, jugs, stone kegs, churns, immense flower vases for garden use, and stone stumps, with cushions on them of the same material, are among the collection. This pottery is all very smooth and exceedingly well glazed and has the peculiar "ring" that indicates the best quality of ware. Office and salesroom, No. 24 California street, San Francisco.		Progne, G. M., Water Tanks.	8 J
Mendenhall, James M., Patent Gate and two Models of Gates.	8 Y	His fits are superb, and by skillfully lining the garments lighter or heavier, he corrects defects in form, or peculiarities of structure, so as to make a mau more of a man than he ever deemed himself to be before he submitted his shape to Nicoll's hand. Worth himself never had a harder task, nor acquitted himself with greater laurels than has Nicoll in some of his wrestles with round shouldered, crooked backed, uneven humanity; and it is this ability to fit, no matter what the shape, that gives his work prominence in every gathering of well dressed citizens in this metropolis.		Pacific Fruit and Vegetable Drying Co., Frui and Vegetable Drier and Fruits.	8 F	Protron, Chas., Gas Stoves.	2 D
This most ingenious and simple, self-shutting gate is upon the principle of an inclined plane. The upper corner of the front of the gate, and the lower corner at the back or heel are supported by sheaves running upon iron tracks fixed on parallel inclined planes above and below, so that the weight of the gate runs it down the inclined planes and closes it. The heavier the gate the quicker it shnts, and the more boys limb on it the closer it sticks to its track. It cannot sag nor stay open unless fastened so. His invention is also applied to double large gates, with levers and pulleys so arranged that a team driving through opens the gate as easily as a man can take his hat off. The invention was patented through the MINING AND SCIENTIFIC PRESS Patent Agency. Address James M. Mendenhall for county rights or information, Livermore, California.		Employing only white help, and intelligent, skillful labor at that; and carefully superintending every operation, he is enabled to turn out suits at low prices that are the wonder and envy of his competitors. "How can he afford it?" say they. It all lies in just what we have said and may be summed up in short meter as, buying direct, selecting carefully none but the best goods and employing none but honest, skillful employes, selling at a moderate profit and giving just what you profess to on every order.		Pacific Lamp and Reflector Factory, Lamps and Reflectors, Ornamental, Stamped, Spun and Cast Zinc Metal Spinning.	3 I	Randall J., Eucalyptus trees and Extracts.	3 R
Merrill, R., Case Dulcimers.	1 N	Leaving his exhibit at the fair, go to his establishment, No. 505 Montgomery street, and see the extensive stock of cloths he gives his customers to select from: Scotch Cheviot that will turn the heaviest rain, English and French beavers that are as fine and soft as the down of the eider, Doeskins, double and single, that will outwear rawhide and always look nice, Diagonals that time has no effect upon, and are dressy from the first to the last, Broadcloths that seem to be made of the cloth of gold sheep of Spain's proud monarchs, all at prices that stagger dealers who don't know the secret of his purchasing.		Pacific Boring Co., Great Western Well Auger.	Yard	Ransome, Ernest L., Artificial Stone Fountains, Vases, Cemetery Improvements etc.	8 F
Merrill, P., Model of Carpet Beating Machine.	7 V	"A man's a man for a' that," but good clothes help every one in any walk of life, from counting to counting, from preaching to practicing, and to go with a cheap, poor suit on your back to sue for a young lady's hand, will at once settle your case if she knows that "Nicoll the Tailor" is still in the trade.		Pacific Oil Stove Co., Oil Stoves.	6 W	Ransome, E. L., Head & Sams Threshing Machine Engine.	8 Z
Myers, S. E. B., Koumiss, Consumption Cure.	6 J	The leading tailor of San Francisco for style; the most successful tailor in the State for business; the cheapest tailor in the city for good suits; the best fitting tailor known to the world, and the best stocked tailoring establishment on the coast, ensures Nicoll the best trade of any one in the business that can be named in a reasonable period of time. His large trade forced him to open a branch at No. 18 Kearny street.		Pacific Rolling Mills, Bolts, Nuts, Screws for House Raising, Merchant, Railroad, Square, Shafing and Beam Iron, Turnbuckles, Switches, Safety Clutch, Chains, etc.	4 & 6 X	Renling & Seyd, Refrigerators.	4 L
Koumiss, as its name implies, is of Russian, or rather Tartaric origin, and is that form in which mare's milk is most commonly used by that wild people, among whom no diseases are known, and who recover from wounds that are generally considered fatal in civilized countries. Its valuable qualities as an antidote or conqueror of dyspepsia, liver complaints, and diseases of the lungs, has brought it into great repute in Russia, where it is now generally made of cow's milk, and has turned attention to it here. Mr. Myers undoubtedly possesses the secret of its manufacture, and his factory at No. 525 Capp street is daily being increased to accommodate the demand.		Nutting & Son, Scotch Tubular Iron Harrows, Iron Harrows on Wheels, Gang Plow with Slip Shear, Pat. applied for, Seed Sower.	4 Z	Paillard & Co., Musical Boxes.	1 X	Renton Coal Co., Redwood Pierced by Woodpeckers, Renton Coal.	4 V
Miller, Mrs. M. A., Millinery Goods.	3 B	The harrows exhibited by this firm are one of the practical improvements in agricultural implements. Beside the advantage gained by having the teeth inserted in a non-shrinking substance, either wing of the harrow may be turned up to avoid and pass obstacles, and when on the road the whole harrow is raised by crank levers upon wheels. The self-sharpening, slip-share gang plow is a new invention and will probably be a favorite. Fire-proof windows, girders, bank vaults, gratings and general iron work are also done by this firm, who are sole manufacturers of patent metallic tubular wheelbarrows, at No. 121 Fremont street.		Palmer, H., Cal. Port and Sherry, Cal. Wines of all kinds.	6 L	Reynolds, Rix & Co., Ingersoll's Rock Drill, Dry Air Compressors, King Engines, Miners' Horse Power.	8 U
Miller, J. F., Plants and Flowers.	Garden	Oakerlund, P., 5 models of Fifth Wheel.	2 V	Parson, W. D., (Colorado) Wind Engine.	8 J	Rhodes & Wason, Borax and Salt.	4 V
Miller, J. M., Side Plated Show Case.	4 R	Oshorn & Alexander, Mechanics' Tools, John Barnes' Foot Power Saws.	8 G	Parke & Lacy, Direct Acting Plunger Pump from Sutor Tunnel, Hoisting Engine, Hot Air Engine.	8 Q	Ridgeway, C. W., Single and Double Spring Mattresses.	4 O
Möser, J., Instrument Strings.	1 N	Barnes' foot-power machinery comprises 13 different machines for carpenters, cabinet makers, wagon makers, jewelers, dentists and farmers, consisting of scroll saws, turning lathes, mortising machines, hand-power circular ripping saws and shapers. Send for 64-page catalogue. Mechanics' tools of the latest improvement and best quality a specialty. Amateur scroll sawyers' supplies, fancy woods, etc. Send for catalogue. Osborn & Alexander, 628 Market street,		Pedler, Thomas C., Empire Coal.	1 L	Rieger, P. & Co., Flavoring Extracts Sodas and Lemon Sugar.	5 R
Mohr, G., Rustic Fountains.	Garden			Pendergast & Smith, Propeller.	8 S	Roach John, Mathematical Instruments.	6 M
Moore, Mrs. H. A., Hair Restorative.	3 P			Pfister, J. J. & Co., Knitting Machines and Goods.	2 B	Robbins, F. A., Cannery Press and Set Jewelers' Rolls.	8 N
The theory advanced by Mrs. Moore that the human hair is vegetable and only wants the proper cultivation to promote its growth, and that its reproduction by the use of her restorative is certain, seems fully borne out by the photographs of "men we know" taken before and after using her preparation. Using no mineral or deleterious drugs in its manufacture, it is the safest hair restorative in the market, and its efficacy is certified to by the numerous ones who have used it. Depot, 108 Stockton street, S. F. Morning Call, Stereotype Plates.	1 O			Phillips, J. S., Prospectors' Assaying Apparatus and Specimens.	4 O	Roberts, Geo. F., case French and Fancy Candies.	3 Q
Montague, W. W. & Co., Ranges, Stoves, Marbleized Iron, Mantels, Japan, Granite, Planish Copper, Nickel Plated Tinware, Fire Grates, Irons, Perfection Oil Tanks, etc.	2 H			Plummer, C. B., Family Fruit Drier Case Samples. One model Factory Drier.	8 X	Rochiccoli, R. F., Statuary and Ornamental Bronze work, Gold and Silver Plating work, Patent Champagne Faucet, Nickel Plated.	5 I
Morris & Son, Pneumatic Bells, Bronze Lock-Ware and Hinges.	8 M			The above invention does away with the old style of fruit drying and inaugurates the reign of fast work and fine catabile fruit. A heavy iron furnace furnishes heat to several flues, which enter the bottom of the drier, and by their heat creates a draft of cold air, which passing up through the consecutive sieves of fruit, dries it out in about an hour, ready for boxing for market. Testimonials without limit certify to the capacity of the family drier to be all it is claimed, and one old lady of 72 years tells of running one herself to great profit. Its product has taken several premiums, as well as the invention itself. Address W. S. Plummer, East Portland, Oregon.		Roman A. & Co., Books, Cards, and Stationery.	3 O
This invention consists in using air tubes instead of wires for ringing signal bells. By different modes a rubber receptacle of air is compressed, which forces the air through the tubes to another rubber receptacle, which being distended by the incoming air, causes the clapper to strike the bell. Used on the big bell of the Stock Exchange and over a hundred residences in this city and they have been placed upon the steamer "Mary Garratt." Morris & Son are also fitting up the City Hall with these tubes and bells, as also the locks and hinges for the entire building. Factory, 1045 Market st., S. F. Morris, Thomas B. & Co., Seattle Coal.	7 D			Plum, Chas. M., Carpets, Rugs, Window Drapery and Furniture.	2 A	Ross M., (San Jose), Triple Plow.	4 Y
Nathan & Dreyfuss, Brass Injectors and Brass Ejectors.	Engine Room			Pohcim, Joe, Cloths and Custom Made Clothing.	2 Y	Rosenstein's Band.	Music Balcony
News Letter, S. F., 80 Pictures (Men we Know) and "News Letter."	6 U			Plum, Chas. M., Carpets, Rugs, Window Drapery and Furniture.	2 A	The headquarters of this celebrated band are at the Lindell House, corner of Sixth and Howard streets, and as at present constituted and so acceptably performing each day at the Mechanic's Institute Fair, can be engaged for concerts, serenades, picnics, balls, etc., at short notice and reasonable prices. A first-class string band is connected with this organization, and therefore theaters can be furnished with any number of musicians for special or regular service.	
Newell, Mrs., Braided Mats.	1 T			Potrero Distilling Co., Compressed Yeast.	4 I	Theodore Rosenstein, conductor.	
Newton, G., Stylograph and Day's Automatic Incubator.	6 U			This valuable article is fast coming into general use, now being kept at nearly all groceries, as a matter of course. In a cool place it will keep for a week, though the supply is sent around daily to all the depots. No better recommendation need be given it than the fact that all the principal restaurants use it. Each morning their train may be seen supplying the first-class establishments along Kearny and other principal streets. Always of uniform quality and strength, the bread cannot be otherwise than good, made with it, and has not the taste of hops, usually imparted by brewer's and home-made yeast. It is kept by all grocers, and at the depot, No. 745 Market street.		Rottanzi, G. Long Life Bitters.	7 I
Nicoll, A., Cloths and Custom Made Clothing.	3 T					Russell J. J., Galvanic Appliances.	6 M
"Cloths and clothing" expresses a great deal, but when applied to such a display as that made by "Nicoll the Tailor," is entirely inadequate to do justice to the exhibit. It is very unfortunate that this should be the "off year" of the fair, i. e., the year in which no premiums are given, for Nicoll's display of goods in the fair deserves something more than mere entry in the catalogue. Were it otherwise, no mention would be made here of it more than that accorded to other exhibitors at the fair.						Rustic Factory, Hall's Rustic Work.	Garden
A careful examination of his stock, both at his place of business and in the fair, develops the fact that it is all new goods, and of the finest quality of its braud, of cours being of different degrees of fineness and price to suit the purchasing capacity of his customers, and yet all manufactured of the best raw material to be obtained.						S. F. Gaslight Co., Preparations of Ammonia.	3 M
Speaking of raw material reminds us of the fact that experienced judges, like Nicoll, only						S. F. and Pacific Glass Works, Newman's Improved Box Demijohns, general assortment of Bottles, all kinds and colors.	5 Q

NAMES AND EXHIBITS.	LOCATION.
Solly, S., Cement.	3 Q
Sornin A., assorted Gas Stoves.	2 D
Souther & Co., J. N., Green Ginger Brandy, Bennett's Bitters.	7 K
Spear, Meade & Co., Los Angeles Honey.	4 V
Spaulding, N. W., Circular Saws with patent Inserted Tooth.	—
Sresovich Luke G. & Co., Fruits, Apples, 5 kinds Pears, 3 kinds Mazatlan Limes; also Bananas and Cocoanuts.	4 V
Standard Soap Co., Soaps, Toilet and Staple	4 H
Starr & Mathieson, samples Regulat Antimony.	4 V
Standard Oil Co., Pearl Oil.	2 W
Steiner, A. J. (Yolo), samples of Wheat.	4 V
Sterling, W. A., Model of Quicksilver Condensers.	—
Stivers, H. F., Pacific Coast Woods of all kinds.	4 V
Stockton, E. A., Kitchen Tahles.	3 R
Storey Bros., St. Helena, Hops.	4 V
Stout, A. A., Poulett's Atmospheric Letter Copying Press.	3 R
Sweetser & DeLong, Cider and Vinegar.	3 N

Those who have tasted the cider of the above mentioned exhibit in the Fair, know that it is pure and unsurpassed, and we can vouch for the extent of the orchard from which it comes. Very few care to sample the vinegar on exhibition by them, but if housekeepers would only try it, they would at once order some for home use. It is the first-class article, pure and warranted to keep in any climate. Their boiled cider is just the thing for mince pies and sauces, and is sold by the gallon for family or saloon use, as well as cider and vinegar, at No. 117 Pine street.

Sweepstake Plow Co., Hill's Improved Eureka, Sulky, Grange and Steering Gang Plows; also Sulky, Buggies and Wagons.

The display of this company is one of the best and most instructive in the fair. Their iron wagon with Duval wheels, is something new and evidently strong. What a contrast would it make, having no wood about it but the pole and coupling, with an old-fashioned wagon having no iron about it but linch pins and tire! They also show a few other articles of their manufacture, including Hill's Eureka sulky plows, Grange and Steering gang plows, sulky, buggies and wagons, in which latter industry they have lately embarked. Like all of their work, these are first-class, durable and well finished. The factory is located at San Leandro, Cal.

Strozynski, Stanislaus, Human Hair and Hair Dressing.

Swan & Brook, Illuminating Letter and Sign Painting.

Tatum & Bowen, Albany Lubricating Compound and Cups, Pat. Chisel Tooth Saws.

Their display of Hoe's patent saws, teeth and points is particularly fine and illustrative of the progress in this direction in the past decade. These teeth are the *sine qua non* of sawyers, and indispensable in mills that run for profit. The Albany lubricating compound was used on the crank pin of the driving engine of the fair, and was the only lubricator that would not heat on that place. They are also agents for Hoe's presses, country and city styles, drum and cylinder, with valuable recent improvements. All sizes of which they will keep in stock. Office, No. 3 Fremont street, corner Market, San Francisco.

Tay, Geo. H. & Co., Ranges, Stoves, Granite, Japan, Planished and Tin Ware; Copper Boilers, Sewing Machine and Jig Saw Motor Power, Cheese Vat, etc.

Taylor, M. C., specimens of Chromite and Magnetite.

Taylor, S. P. & Co., Printing, Blank, Hanging, Manila, Tissue Paper, etc.

Paper, in these days of cheap printing and many books, has assumed as much importance among civilized nations as with the Japanese, where it is used for building purposes and clothing. The above firm makes a fine showing of their capability in the line of paper making, and are competing successfully with the Eastern made article in our markets. Being pioneers and owning the Pioneer Mill, they have benefited by experience, and turn out a superior article in every line of their manufacture. A large stock of all sorts is always on hand at the warerooms, No. 416 Clay street.

Taylor, A. C., Excelsior Range and Gas Stoves.

An inspection of Mr. Taylor's exhibit convinces any one that he is an ingenious mechanic, and knows what he is about. His Gas Stove is upon a new principle, economic and healthful in action. The ranges are provided with special connecting pipe, running from the outside around the lower part of the furnace up into the hot closet. The cold air enters this pipe, is heated in passing the furnace, heats the hot closet, and is released at will by means of a damper. His new broiler is an excellent article for saving the juices of steak, and his cake griddle is an achievement for the benefit of womankind. All should order these improved articles from his store, No. 816 Montgomery street.

Taylor, F. B. & Co., Cal. Coal Oil, Sapolio and White Lead.

Teubner & Hoffman, Silver Plated Show Cases and Aquarium.

Thornton, John, Fancy Gaiters.

Thompson, Geo. C., Soda Fountains and Apparatus.

For several years Mr. Thompson has acceptably provided this beverage for the frequenters of the fair, and always an excellent article. He has been established in the business ever since

NAMES AND EXHIBITS.	LOCATION.
1850, and has kept pace with all the improvements of the day both in fountains and soda, until now he is the largest manufacturer of mineral and soda water on the coast. He is a large importer of and dealer in soda machines and fountains, soda stock, twine, corks, counter ornaments, etc., a good stock of which is always kept by him on hand at No. 526 Union street, San Francisco.	—
Toobey, C. & Co., Coffee, Tea, Spices, Extracts and Oils, general assortment of Groceries, Noble's Whiskies, and Liquors of all kinds	5 U
Tracy, J. P. & Co., Printing Press and Material.	3 W
Tracy, Mrs. F. P., Rag Mats.	1 Q
Trumbull, R. J. & Co., Garden Seeds, Antique Pottery, Fancy Flower Pots and Trellises.	—
Truworthy, F. M., Stencil Plates and Rubber Stamps.	1 I
Tustin, W. I., Irrigating Pumps.	8 J
Tyler, Mrs. Mary, Patch Work Quilt.	1 R
Van Blarcom, A. L., Southwick's Turbine Windmill.	8 S

The many claims of excellence made by the proprietor of the Turbine mill are certainly worthy of investigation. That they cannot be blown down is self-evident. That the fact of their being built upon the same principle as the Turbine water wheel, which we know to be the most economical use of water in a wheel, would establish their claim for light running or running on a lighter wind than most others. Protected from the effects of the weather, they cannot but be more durable than any other in use. They are manufactured by A. L. Van Blarcom, Second street, between Washington and Broadway, Oakland.

Vandenbergh, Dr. J. P., Tape Worms.

Van Wart, Wm. (Butte Co., Cal.) samples of Wheat.

Vogele & Bro., J., assorted French Mixed Candies.

Vulicevich, M., Alligator Pears.

Wakeling, Mrs. L. P. & Co., Blood Purifier, Elixir of Life, and Magnetic Oil.

Wangenheim, Sol., Mixed Pickles.

Ward, W. M. & Co., Gilt Edge Tonic.

Wakefield Rattan Co., Rattan Furniture.

Including a magnificent display of rattan furniture, this company also exhibit an immense variety of rattan baskets and door-mats, chair-cane, carriage mouldings, etc., also a large exhibit of the famous Kurrachee rugs. These rugs are fully equal in appearance and durability to the best Persian and Turkish, but sold at less than one-third the price of the latter. They are made entirely of wool, and patterns to match any carpet are exhibited. The unprecedented favor with which they are meeting, warrant the assertion that they are the most popular rugs in the market. Kept by all carpet dealers. Salesroom, No. 38 Geary street, San Francisco.

Warren, Col., Elephant's Grinder, First Sack of Flour made and exhibited in Cal., 1853; first Broom exhibited in State Fair, won Silver Medal of Ten Dollars, 1852; Piece of Ship "Cadmus," in which Lafayette first came to the United States in March 6th, 1777, Rice, Flax, Hemp.

Warren & Co., Eucalyptus Tree Preparations.

Washington Irrigated Colony, (Fresno Co.) Fruits, Grains, etc.

Waterhouse & Lester, Carriage Material.

Webster, J. R., Model of Wave Power.

West Coast Furniture Co., Bed-room, Office, Dining Room and School Furniture.

The beautiful furniture shown by this company elicit admiration from every one. Strength, beauty of wood, elegance of design and ornamentation, combine to render their products the finest of any establishment on the continent. The antique dining-room set, in oak, is complete in all its appointments, and carries us back a hundred years. The Toa wood set, paneled with French mahogany, is incomparable; and the Tomano furniture looks as rich as it is possible for wood to do. Primavera reminds one of the old butternut of the East, or white walnut. This company operate on a large scale, and can fill orders for furnishing hotels or private residences on short notice. Office and factory, corner Fourth and Bryant street, San Francisco.

Weed & Kingwell, Brass Work.

Messrs. Weed & Kingwell make a fine exhibit of a general assortment of brass goods, consisting of finished and rough bells, steamboat bells, steam gauges, whistles, oilers, and, in short, every variety of brass goods for steam engines and other purposes. It is scarcely possible to conceive of better work than these brass castings now on exhibition. Everybody who knows anything about this branch of manufactures is aware that great skill in metallurgy and chemistry as well as mechanical invention is necessary to complete success. All these requisites are possessed in abundant measure by Messrs. Weed & Kingwell, No. 125 First street.

Weeks, L. F. & Co., Oakum.

Weichhart, J., Hay Cutters, Reaper Knives, Edged Tools and Safe, Lawn Rakes.

Weister & Co., 1,407 Useful Inventions.

Wells, Mrs. L., Japan Silver Polish.

Whitman, (inventor) Mrs. E. J., Kettle Scraper.

Any housewife who has scraped a mush or fruit kettle for half an hour knows about how much work it is; but male humanity has but little idea of it, and consequently left it for a woman to invent a kettle-scraper which should be a saving on spoons and elbows, to say nothing of time and patience. Go up in the gallery

NAMES AND EXHIBITS.	LOCATION.
and call at Mrs. Whitman's stand and see it. If you are not convinced that it is the one thing needful, buy it and take it home for your wife to pass judgment on, or address for town and county rights at agency, Mrs. E. J. Whitman, Oakland, Cal.	—
White, Capt., Model Pat. Fire Patrol Wagon.	7 V
Whittier, Fuller & Co., Pioneer White Lead.	6 F
Wheeler, S., Carbon Engine. Engine Room Willard, Z. A., Ore Roasting Furnace.	9 N

This furnace consists of a cylindrical chamber, which is made, according to its dimensions, of either wrought or cast-iron. This chamber or retort has a false bottom, somewhat on the principle of a Bessemer converter, which separates it from another chamber, into which a blast of air is blown. The false bottom is perforated in order to allow a finely-divided current of heated air to pass up into the ore to be treated. The furnace is so arranged that charging and discharging are very easily performed, and the operation may, without difficulty, be made entirely automatic. The cheap and effective reduction of refractory ores is the most important problem that has presented itself to miners and millmen; for nearly every mining section has its full quota of such ore, the successful working of which would be sure fortune to hundreds of hard-working miners who are now struggling vainly to get the precious metal separated from the baser ore. We believe this has been at last solved satisfactorily by the invention above described. Mr. Willard has introduced his method without any special horn blowing, and quietly set it to work in the Pavilion and elsewhere, and has successfully treated some of the most rebellious ores, both arsenical and sulphuretted, from Amador, Butte, Placer, Sierra and Tuolumne counties, and also the far-famed Meadow Lake ore, heretofore unconquerable. It is cheap, easily understood, more easily worked—for it works itself—durable, and has but little machinery about it. The plant is comparatively inexpensive. It is at work in the Fair every afternoon and evening, and miners and millmen will find it to their interest to call and examine its workings, which they are cordially invited to do.

Wilson Sewing Machine Co., Machines and Sample Work.

Wilson, T. A., Improved (Little Chief) Washing Machine.

This washer acts by atmospheric pressure. When the piston rises it fills with air; descending, the valve closes and the air is forced through the clothes, carrying the water and dirt with it. The driving of the whole is mere amusement for a child. The power can be detached when desired in two minutes, and used to drive a churn dash with equal facility and ease; with it a child 10 years old can do a 10-pound churning. Canvasers wanted. D. M. Jacott, Agt., 211 Polk st. Wilcox & Gibbs S. W. Co., Automatic Sewing Machine and Work.

Woerner, David, Wine Casks.

This exhibit is one of the best ever made in the fairs of our State. The immense wine pipes are 11 feet high and 8 feet long, with concave heads and brass fitted man-holes, hooped and finished in the finest manner, and are models of strength and workmanship, as are also the small pipe and beer barrels. At his factory, No. 104 Spear street, every style and size of cooperage can be furnished at the shortest notice from selected stock.

Wood, Benjamin, Pat. Portable Houses.

Woodward, R. B., Birds and Animals Stuffed, Tropical and Ornamental Plants.

As has been his usual custom, Mr. Woodward comes nobly forward and adds to the attractions of the pavilion by exhibiting his beautiful collection of ferns and flowers, and a large case of taxidermical specimens. Not having them for sale nor expecting to derive any benefit from their exhibition, makes the display praiseworthy. The mounted specimens of beast, bird and reptile are very fine samples of what may be seen in much greater numbers at his gardens; and the richness of the ferns and few other plants shown are but indicative of what appears in much greater profusion at his conservatoire in the far-famed Woodward's Gardens.

Worth, W. E., Stationary Washbowl Trap.

Yates & Co., Lamps, Oil Blacking and Axle Grease.

Young, Madame, Toilet Articles.

Zolezzi Nicolò, Wooden Puzzle.

Our Market Review will be found this week on Page 180.

Woodward's Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a boa-constrictor have just been added. New stars are constantly engaged for the Pavilion exercises. Rates of admission as usual.

UNION READING ROOMS, FIRST STREET, SAN JOSE. WELCOME TO ALL!—Having lately been removed to the old hall of the City Zouaves, this institution is located in a pleasant and spacious apartment. The latest and best periodicals of the day are found on its tables, free to all. Also many choice volumes upon its shelves. Good music is provided for every Wednesday evening's social. Admission [to these entertainments, 25 cents—to pay expenses.

FOR PRINTING MATERIALS, the publishers of this paper patronize Marder, Luse & Co., Pacific Type Foundry and Printers' Supply Warehouse, 522 Clay street, San Francisco, Cal. Send them a stamp for specimen sheet, and say advertised in this paper.

Vertical Feed Victorious.

THE NEW
"DAVIS VERTICAL FEED"
Lock-Stitch Sewing Machine.
Lightest running Shuttle Machine in the world.

SO CONFIDENT ARE WE THAT THE
VERTICAL FEED

(Which is as far in advance of the old feed used on all other machines as steam is ahead of horse-power, and is the exclusive property of this company), is the
ONLY POSITIVE SUCCESS
In all Departments of Sewing, that we make the following offer:

One Thousand Dollars

Will be given to any person (sewing machine experts included) who will, with any other sewing machine, follow the "DAVIS VERTICAL FEED" through its vast range of practical work.

All lovers of progressive science and mechanical perfection should see it, and every lady in the land should examine and try the "DAVIS VERTICAL FEED" before deciding to purchase an inferior machine, or a single-thread playing without a tension.

It is impossible to make a strong, elastic, or lock-stitch with any but a shuttle machine.

We are selling WHEELER & WILSON, GROVER & BAKER, SINGER and HOWE Machines for \$10 Each.

For descriptive circulars, price lists, samples of work and terms, apply at the office of the

PACIFIC COAST DEPARTMENT,
130 Post Street, San Francisco, Cal
MARK SHELTON, AGENT.

Underfed Machines taken in exchange as part payment. Our prices are very low for cash. Branch Office, 26 Fourteenth Street, Oakland, Cal.

DRAKE'S BAY COLONY.

Shafter's Rancho, Marin County, California.

13,600 ACRES,

Between North Pacific Coast Railroad and Pacific Ocean, three hours travel by steamer and railroad from San Francisco.

Schooners make the trip to Drake's Bay in six hours, and to Tomales Bay in nine hours. Produce can be shipped to market from the colony by schooner as well as by rail.

Title—United States patent.

Climate—Unsurpassed for mildness and equability.

Soil—Without exception the richest on the coast.

Water—Abundant. A failure of crop has never been known.

Wood—Sufficient for fire and fencing.

Agriculture—The soil, climate and situation render this property particularly adapted to those who wish desirable homes at a short distance from San Francisco.

With the exception of tropical fruits, anything that grows in California can be produced upon this land.

This rancho, famous for its dairies, is now being subdivided into 20, 40 and 80-acre farms, under the auspices of the California Immigrant Union, and will be sold at low figures.

TERMS—One-fourth cash; balance in one, two and three years, with interest at eight per cent. per annum on deferred payments.

For full information, transportation, maps, etc., apply to

WM. H. MARTIN,
General Agent California Immigrant Union,
230 Montgomery Street, Room 23, S. F., Cal.

Parties desiring to visit the tract will be provided with tickets upon application as above.

GREAT SLAUGHTER

IN SEWING MACHINES.

We are now offering for sale, at \$10 EACH, the following machines:

FLORENCE,
WHEELER & WILSON,
GROVER & BAKER.

THESE MACHINES ARE
Guaranteed to be in Perfect Order,
And many of them NEW.

Parties in the country can have them packed and shipped free of any extra charge. Address,

WILCOX & GIBBS Sewing Machine Co.,
No. 124 POST STREET,
SAN FRANCISCO, CAL.

SHARPLESS STRAWBERRY
Largest and Best.

20 CHROMO CARDS (perfect beauties) with name, 10c Outfit, 10c. TURNER CARD Co., Ashland, Mass.

Raspberries, Blackberries, Fruit Trees, Vines and Plants. Send for catalogue to WM. PARRY, Cinnaminson, New Jersey.

Agricultural Articles.

The Famous "Enterprise"

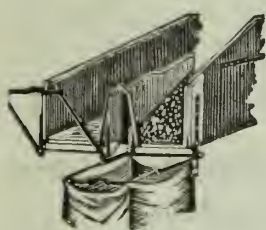
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Self Regulating
WINDMILLS,
Pumps & Fixtures.



These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babitted boxes. Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

HORTON & KENNEDY,
GENERAL OFFICE AND SUPPLIES, LIVERMORE,
ALAMEDA CO., CAL. Also, Best Feed Mills for sale,
San Francisco Agency, LINTH, RICE
& CO., 401 Market Street.

To Threshers.



Hold Your Bags
Save
MONEY!!
FILL
THEM
FULL.
Shake Them Down.

HOW? USE THE
"CALIFORNIA SACKHOLDER."

Simple, Cheap,

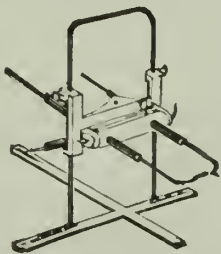
Adjustable to any
Sized Bag.

LONG,

SHORT,

WIDE,

Or Narrow.



Completest Device Ever Invented
and Lasts a Lifetime.

Discount to the trade. General Agency for the
Pacific Coast,

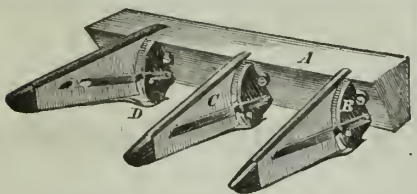
H. M. COVERT,

No. 306 Davis Street, San Francisco.

BAKER & HAMILTON,
San Francisco and Sacramento.

BONNEY'S PATENT

Adjustable Grain Lifter for Headers.



All farmers who wish to save grain without waste in cutting, should examine these. They can be run at any inclination to the ground, as seen at D in cut. Are light, strong and durable, and can be adjusted in 15 minutes, or removed in five when not required, by drawing bolt in malleable shank B. Set of 8 for 10-foot header, (in putting on which bore with 1/4-inch bit for lag screws) are the cheapest and give the best satisfaction of any in use. Parties can save additional cost of a set in one day's cutting, where grain is lodged or trinkles down. Price, \$40. Also, Grain Belts, Header Sticks, etc. Manufactured for **BAKER & HAMILTON,** San Francisco and Sacramento, Sole Agents, Pacific Coast.

MATTESON & WILLIAMSON'S

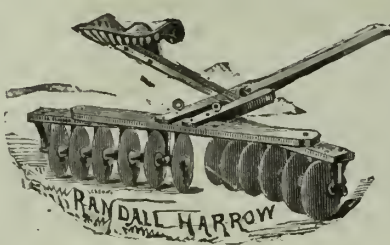


Took the Premium over all at the great plowing Match in Stockton, in 1870. This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,
STOCKTON, CAL.

The Randall Pulverizing Harrow.

A COMPLETE SUCCESS.



OVER 10,000 IN USE.

Local agents wanted. Descriptive circulars and Price list free on application.

Address, **CLAUDE V. BURKE,**
Sole Agent.
Yolo, Yolo County, Cal.

CALIFORNIA FRUIT DRIER

Awarded the

CALIFORNIA GOLD MEDAL

AND THE

U. S. Centennial Grand Medal & Diploma

IT IS THE

BEST FRUIT DRIER,

And the only one that proves a success in making the FINEST RAISINS, FIGS, and the Choicest Fruit at the least expense.

Driers of all sizes put up and no pay asked until tested.

GEO. A. DEITZ, Manager,
SACRAMENTO, CAL.

GILBERT & MOORE,

Manufacturers of

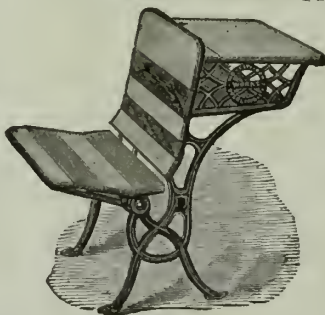
School, Office, Church, Lodge and Household Furniture, Etc.

Sole Agents of Pacific Coast for the

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THE BEST IS THE CHEAPEST IN THE END.

"THE PEERLESS."



Unsurpassed for Elegance, Comfort and Durability.

The Best Made School Desk in the World.

Six sizes made, single and double. Send for our Illustrated Catalogue and Price List. School supplies of all kinds in stock and to order. Good reliable agents wanted in every town on Coast. We offer the best Desk as cheap as the poorest that can be bought.

GILBERT & MOORE,
219 Bush Street, San Francisco, Cal.

H. H. H.

HORSE MEDICINE,
D. D. T.—1868.

As a horse medicine it is superior to any liniment ever invented. For RINGBONE, SPRAIN, SWEENEY, CALLOUS LUMPS, and all old sores, apply freely so as to blister, from three to five days in succession, and in four or five days, if not cured, repeat as at first. SPRAINS, STIFF JOINTS, BRUISES, WINDGALLS, and all slight ailments, apply a small quantity so as not to blister. Saddle Sores, Cuts, and all other sores where the skin is broken, mix the liniment half and half with any kind of oil, and apply in moderation.

WILLIAMS & MOORE, Proprietors,
STOCKTON, CAL.



Calvert's Carbolic
SHEEP WASH,
\$2 Per Gallon.

After dipping the sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. **T. W. JACKSON,** S. F., Sole Agent for Pacific Coast.

Nurserymen.

SHINN'S NURSERIES.

NILES, ALAMEDA COUNTY, CAL.

We invite attention to our large stock of

Fruit Trees and Ornamentals,

Of the most approved varieties. Also, Coffee, Cork Oak, Olives, Guava, English and Black Walnuts, Magnolias, Loquats, Butternuts, Small Fruits, Evergreens, Etc. We have a choice stock of the Diospyros Kaki (Japanese Persimmon), of our own growing, and also, grafted stock imported direct from several Japan Nurseries. Address for catalogue and terms,

DR. J. W. CLARK, No. 418 California St., San Francisco,
Or **JAMES SHINN,** Niles, Alameda Co., Cal.

ESTABLISHED IN 1858.

PEPPER'S NURSERIES.

An unusually fine stock of trees is offered for sale at low market rates for reliable nursery stock, comprising all the leading kinds and varieties of hardy fruits. Also, a general assortment of evergreen trees and shrubs, blue gums, Monterey cypresses, etc., in boxes for hedge and forest planting.

My trees are grown in a sandy loam, without irrigation; can be no finer rooted trees grown; wood ripens early, and can be safely transplanted as soon as sufficient rain falls for lifting the stock. Early planting recommended. Catalogues with list of prices ready for distribution October 1st.

W. H. PEPPER,
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Poultry.

THOROUGHbred POULTRY.

116 Acres

DEVOTED TO

FANCY
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Unlimited Range.

Healthy Stock.

Largest Yards
on the Coast.

Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.

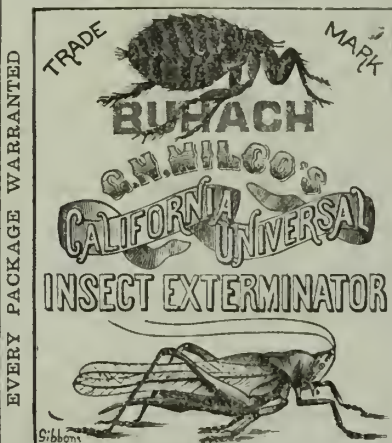
Safe arrival of Fowls and Eggs Guaranteed.

Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents. Send stamp for price list. Address

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EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her,



This trade-mark is registered by G. N. Milco, May 7th, 1878, in the Patent Office at Washington, D. C. The most wonderful discovery of the Nineteenth Century.

INSECT POWDER.

A California Production.

Retail price, 25 cts. and 50 cts. per package.

Directions for use with each package.

G. N. MILCO,

Patentee and Sole Manufacturer, Stockton, California.

Ask your druggist and groceryman for it. **STEWART & BUCKLEY, Agents,** 513 Sansome Street, San Francisco, Cal



BURNHAM'S WATER WHEEL.
STANDARD TURBINE.
WARRANTED BEST & CHEAPEST.
Also, MILLING MACHINERY.
PRICES REDUCED APR. 20, '78.
Pamphlets free. OFFICE, YORK, PA.

DALTON & GRAY,
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WHOLESALE DEALERS IN

All Kinds of Country Produce.
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Commission Merchants in Cal. Produce.

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SUCCESSORS TO

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FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

* "Guide to the Vegetable and Flower Garden will be sent FREE TO ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

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SEEDS.

IMPORTED.

Crosby's Extra Early Marblehead Mammoth }
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ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

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SEEDS. TREES. SEEDS.

Continually arriving, NEW AND FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

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Sixty miles from San Francisco, at the terminus of the North Pacific Coast Railroad, Sonoma County, is offered for sale on very favorable terms.

There are 3,500 acres of Redwood Timber land, new steam Saw-mill, general store, dwellings, logging railroad, water works, etc.

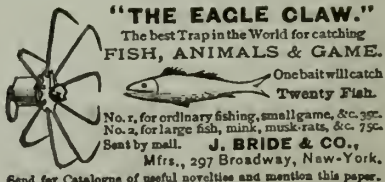
Satisfactory reasons for selling will be given to prospective purchasers.

Also, if desired in connection with the above, a lumber yard on the Bay of San Francisco, having superior facilities for shipping by rail or by water, and having a large and constantly increasing business.

For full particulars address

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"THE EAGLE CLAW."

The Best Trap in the World for catching

FISH, ANIMALS & GAME.

One bait will catch Twenty Fish.

No. 1, for ordinary fishing, small game, &c. 35c.

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Send for Catalogue of useful novelties and mention this paper.

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NAVY Tobacco

Awarded highest prize at Centennial Exposition for fine chewing qualities and excellent and lasting character of sweetening and flavoring. The best tobacco ever made. As our blue strip trade-mark is closely imitated on inferior goods, see that Jackson's Best is on every plug. Sold by all dealers. Send for sample, free, to C. A. JACKSON & Co., Mrs., Petersburg, Va.

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25 Styles of CARDS, 10c., or 10 Best Chromes, 10c., with name. Samples 3c. **J. B. HUSTED,** Nassau, N. Y.

Stock Notices.



SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

E. W. WOOLSEY,
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Breeder and Importer of the "Crown Prince," "Sambo," and "Bob Lee" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.

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BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,
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BERKSHIRE and POLAND CHINA
PURE BLOODS.

The undersigned have a supply of young pure bloods of Berkshire and Poland China breeds of Pigs, and one Poland China Boar 19 months old, for sale. We will be ready to furnish to order at any time in the future. Pedigree furnished. We are making a specialty of these breeds for market.

GREVES & WHITE,
Riverside, San Bernardino Co., Cal.

Grangers' Bank of California,

42 California Street,

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Authorized Capital - \$2,500,000,
In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

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The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

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PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit & Packing Boxes Made to Order,
AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOK & GREGORY

HEMORRHOIDS OR PILES,

A treatise on their scientific treatment and radical cure, by E. J. FRAZER, M. D., San Francisco. Price, 25 cents; for sale at the bookstores and by the author at 221 Powell street. Sent by mail to any address on receipt of the price in coin, currency or postage stamps.

Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Pardee.



The Strength of All its Parts,
The Simplicity of Its Construction,
The Rapidity of its Fire,
The Power and Accuracy of its Discharge,
The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder,

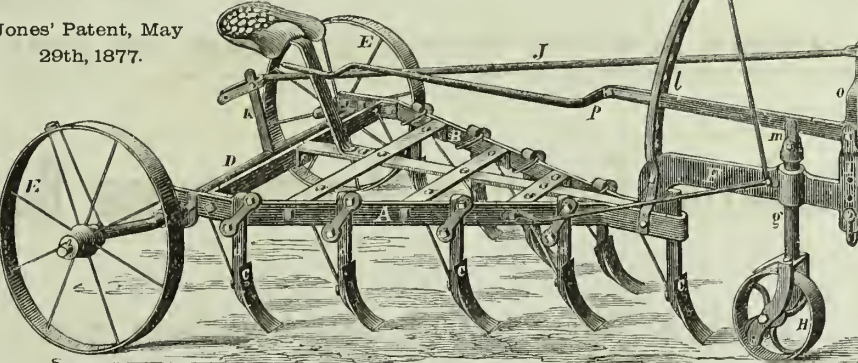
JOHN SKINKER, No. 115 Pine Street, San Francisco.

SOLE AGENT FOR THE PACIFIC COAST.

HOLLY & MACOON'S CULTIVATOR.

Manufactured by Holly & Magoon, Stony Point, Sonoma Co., and
Holly & Jones, Lakeville, Sonoma County.

Jones' Patent, May
29th, 1877.

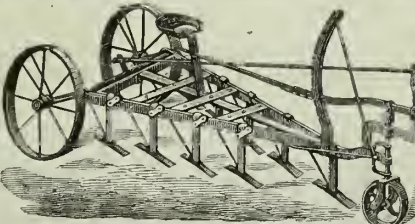


This Cultivator is made by practical men, after years of experience, and better meets the wants of California farmers than anything before offered.

Made of the best material (with wood or iron frame), and warranted in every respect.

Prices
REASONABLE.

For further information address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Francisco and Sacramento, Cal.

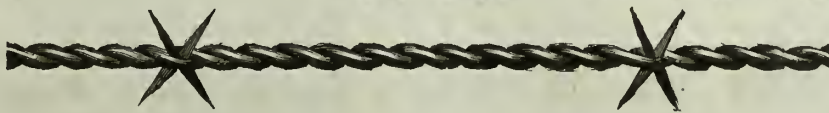


Our new
DOUBLE-BOX WHEEL

Is a decided improvement, to which we wish to call the especial attention of those who would secure the best and most durable.

Our STRAIGHT CHISEL CULTIVATORS (patent applied for) are self-sharpening and made of the best cast steel, with an improved method of fastening to the standard, approaching perfection itself.

TO OUR PATRONS AND THE PUBLIC.



Having obtained the control of the SCUTT PATENT MACHINERY on the Pacific Coast, we beg leave inform you that we are manufacturing the

Scutt Patent Four-Pointed Steel Barbed Fence Wire,

And we claim its superiority for the following reasons, viz: It is plated, thereby preserving the grain of the metal. Our machines do not twist the single strand. We use steel made by the Scamman & Martin process for barbs. Our wire is made entirely by machinery, and is perfectly uniform. It is plated by patent process, and is weather-proof. There are no knife points. It is four-pointed, having 128 points to the rod, double the number of any two-pointed wire. Our wire is wound upon strong spools, and can be shipped any distance.

To those needing fencing, and being obliged to transport it long distances by rail and wagon road, we would especially call attention to the difference in cost between barb wire and lumber, as well as in cost of material. It takes 300 pounds single strand for one mile, and less than one-half as many posts as board fences. Please address orders to

GRANGERS' UNION, Manufacturers,
280 and 282 Main Street, STOCKTON, Cal

SACRAMENTO SEMINARY.

SACRAMENTO, CAL.

The Sixteenth annual session of this Institution commences Monday, August 5th, 1878. Young ladies will here find superior facilities for a thorough and finished education, and a home of culture and refinement. The music will be under the direction of Prof. John P. Morgan, founder of the Musical Conservatory of Oakland. For further particulars address,

MRS. HERMON PERRY, Principal.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

ANNUAL MEETING.

The annual meeting of the stockholders of the Grangers' Bank of California for the election of Directors, will be held at the office of the Bank on

Tuesday, the 8th day of October, 1878,
At one o'clock P. M. ALBERT MONTEPELLIER,
San Francisco, Sept. 3rd, 1878. Cashier and Manager,
42 California Street.

Lands for Sale and to Let.

TO LEASE

ON FAVORABLE TERMS,

50,000 Acres of Irrigated Land
in Kern County, with abundance of Water Free.

In tracts of 80 acres and upwards, with comfortable House, good Barn, and Well of excellent water.

CROPS ARE SURE.

An average of 30 bushels of wheat per acre, and other products in proportion, have been raised on this land.

INDUSTRIOUS FARMERS

With stock and implements will find every advantage in acquiring a home and a competence.

COLONIES WANTED.

For further particulars inquire of

McAFEE BROTHERS,
202 Sansome Street, San Francisco

Land for Sale in Napa County.

I am offering my lands in Foss Valley, ten miles north of Napa City, for sale, as follows—to wit:

One tract of 800 acres, including my homestead, 220 acres of which is choice valley land, the balance good grazing land, is well watered, has a large supply of wood, is well improved, has a comfortable dwelling of nine rooms, barn, granary, sheds, etc. Also, a good orchard and choice vegetable garden. Price, \$15.00 per acre.

Also, one tract of 1,020 acres, about 100 acres of which is valley, the balance good grazing hills, is well watered and has enough wood on it to pay for it. Price, \$5.00 per acre.

Also, one tract of 300 acres, 40 acres tillable, a portion can be irrigated from springs, has a large amount of wood on it and 500 rods of stone fence. Is well suited to running a small dairy, and raising pigs and chickens, by which a good living can be made; price \$2,000. The climate is choice, being shut in from the chilly coast winds, but has just breeze enough to make it pleasant; title perfect. The above lands lay contiguous. I will sell the whole or either one of the above tracts on easy terms—a liberal portion can remain at 10 per cent. per annum. If desired, will sell with the land, 1,500 head of Spanish Merino sheep. Come and see me, as I am determined to sell. Address the undersigned at Napa City. WILLIAM CLARKE.

BEE RANCH FOR SALE.

One of the best ranges in the State. At present working 375 stands Italian Bees. Apply for particulars to

D. W. McLEOD,
Riverside

NEW MUSIC! NEW MUSIC!

At Gray's No. 105 Kearny Street,

On receipt of the amount in postage stamps, any of the following pieces will be mailed, post-paid:

BABY MINE, (Song).....Smith, 35 cts

BABY MINE, (Schottische).....Stuckenholz, 35 cts.

EMMETT'S LULLABY, (Piano Solo)....Far West, 35 cts.


LITTLE TORMENT, (Schottische).....Far West, 35 cts.

THE SNOW LIES WHITE, (Song).....Harriot, 35 cts.

ALCANTARA, (Galop).....Chauncey, 75 cts.

GOLDEN OPHIR, (Galop).....Yauke, 50 cts

Send for complete Catalogue of Music and Descriptive list of the



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FLOUR BAGS,
Awnings, Tents, Twines.

119, 121, 123 Clay Street, S. F.

California Steam Navigation Co.

The Steamers

ALICE GARRATT and CITY OF STOCKTON

LEAVE SAN FRANCISCO

DAILY (Sundays excepted) at 5 P. M., from Washington Street Wharf, near foot of Market street.

LEAVE STOCKTON

DAILY (Sundays excepted) at 4 P. M.

T. C. WALKER, G. A. CARLETON,
President. Secretary.

Agents Wanted.

Able and reliable canvassing agents, who wish steady employment and good wages for good services, are invited to address this office and send references.

A GRAND SUCCESS!

Greatly Improved for 1878—New Malleable Iron Chains.

BAKER & HAMILTON'S GEM SEED SOWER.

Directions for Using the GEM Seed Sower.

Bolt the cast-iron rim wheel on the inside of the hind wheel of an ordinary wagon; put the chain on the rim wheel and over the small chain pulley on the Sower, and then bolt the Machine to the bottom of the wagon, the disc facing outward; fill the Hopper with grain and all is ready.

You will notice there are Two Slides covering two openings; if you open the right hand one (facing the hind end of the wagon) the grain will be sown on the left side and behind the wagon, and vice versa. No grain need be wasted at any time by being thrown where not wanted. Grain should be clean, and free from straws, etc.

It is impossible to give directions as to how much the opening should be open to sow a certain quantity per acre. This depends on the weight and cleanliness of the seed and speed of the team. If the Machine is attached to a wheel smaller than 4 ft. 6 in. or 5 ft., and the team walks fast, it will sow too thin behind. We find many attach the Machine to Header Wagons. This is objectionable, as they pull hard over plowed ground, and to sow even, the horses are compelled to walk slower.

PRICE, \$35.

WE ARE SOLE AGENTS FOR THE

Gorham Broadcast Seeders and Cultivators,

Planet Garden Seed Sowers,

**THE SUPERIOR BUCKEYE IMPROVED SEED DRILLS, BAIN WAGONS,
EUREKA GANGS, ETC.**

Address BAKER & HAMILTON,

San Francisco and Sacramento, Cal.

CAHOON SOWERS, \$17.50 CASH. \$20.00 ON TIME.

THE GEM IS THE CHEAPEST SOWER BECAUSE:

It wastes no grain in beginning or finishing.
It sows on either side of the wagon at pleasure.
It sows bluestoned grain perfectly.
It is made at San Leandro, and guaranteed.
It is made of the best material.
It is made in the best possible manner.

It Sows the Grain Evenly.

It will Pay to Buy It.

**This Machine Can be Attached to Either a
Wagon or a Cart.**

The GEM has entirely superseded the old style Cahoon's Sower, which throws the seed out perpendicularly, to be blown about by the wind, leaving a double quantity behind the wagon. The GEM throws the seed the same as if sown by hand. It sows on either side of the wagon at pleasure. It saves the price of itself over any other Sower in one season. In commencing to sow, one-half of the grain is not wasted, as you can close one slide and sow only on one side.



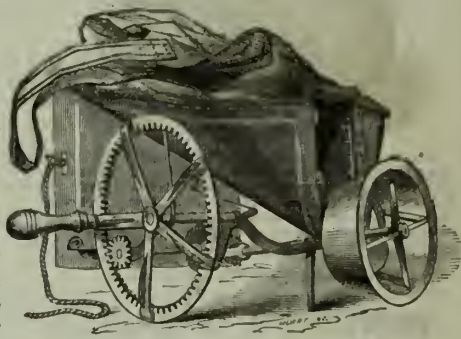
Price List of the Gem Sowers:

No. 1, to run with chain..... \$35
No. 2, Belt..... 40
No. 3, All Gears... 50

CAHOON Sowers:

No. 1, to run with chain...\$17.50 cash
No. 2, to run with belt...\$27.50 cash
No. 3, to run with all gears...\$35 cash

We manufacture these Seed Sowers at San Leandro.



CAHOON HAND SOWER, \$10.

MUSIC BOOKS

For the Fall Trade.

THE HARMONIA.

FOUR-PART SONGS for MALE VOICES.

This is an entirely new book, music well-selected, and with German and English words, the latter translated by L. G. ELSON. A valuable acquisition to the list of Male Quartet books.

Complete, \$2.50; Vocal Parts, each 60 cts.; Together, \$2.00.

Teachers, etc., are invited to send for Catalogues and Circulars, containing large lists of the best, most useful and newest books for their use the coming season.

DITSON & CO.'S MUSICAL RECORD.

A new Weekly Musical Paper, commenced September 7th. A wide-awake paper for Music Teachers and their Pupils, Organists, Players and music-lovers generally. Six pages reading matter, six pages selected music, (312 pages per year,) \$2 per year in advance.

Teachers of Singing Classes will please examine L. O. Emerson's "Onward," (\$7.50 per dozen,) similar to the "Encore," so widely known. Or A. N. Johnson's "Method for Singing Classes," (\$6.00 per dozen) or Emerson's "Salutation," (\$12 per dozen) for Choirs and Singing Schools.

All books sent post free for Retail Price.

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C. H. Ditson & Co., 843 Broadway, New York

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THE YOLO AGRICULTURAL WORKS,

CONSISTING OF

WOOD and IRON WORKING MACHINERY

— AND A —

FOUNDRY,

Suitable for all kinds of Agricultural Manufacturing or House Building. Address,

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Woodland, Yolo County, California

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Roots and Cuttings For Sale,

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California Furniture Manufacturing Co.,

224 & 226 BUSH STREET, SAN FRANCISCO, CAL.

Manufacturers, Importers, Wholesale and Retail Dealers in

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LATEST STYLES AND LOWEST PRICES.

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AND

SMALL FRUITS.

Our AUTUMN CATALOGUE of the above, beautifully illustrated, will be ready for distribution Sept. 1st. A copy will be mailed to all applicants. Address,

B. K. BLISS & SONS,

SEED, PLANT and BULB WAREHOUSE,

P. O. Box No. 5,712. No 34 Barclay St., NEW YORK.

A Good Dairy Ranch For Sale

On Bear River, Humboldt County, Cal., containing 600 acres of as good grazing land as any in the State. New Dairy and Dwelling House. The land is well watered, and plenty of timber for firewood and shelter, and well fenced. I will also sell with the ranch 100 head of choice dairy cows and fine horses. Price, \$13,000, one-half down, the remainder on easy terms for one, two or three years. Apply either in person or by letter to RICHARD JOHNSTON, Post-office address, Myrtle Grove, Humboldt County, Cal., or to R. J. JOHNSTON, No. 1,324 Howard Street, San Francisco.

18 ELEGANT new style Chromo Cards, with name, 10c., postpaid. Geo. I. REED & Co., Nassau, N. Y.

A Country Store Wanted.

— AT —

GLEASONVILLE, TEHAMA CO., CAL.,

May be found a good place to open a country store. We have just finished a splendid new building. It is now ready for goods, and we will rent it on reasonable terms. This place is in the midst of a rich farming country, where crops have never been known to fail. The nearest stores are from 15 to 18 miles distant.

The town of Gleasonville has a good hotel, blacksmith and shoe shop and saloon, but no store. The storekeeper could use from \$8,000 to \$10,000 to advantage, but can do a good business with less. A good man with money to command is wanted to open the store.

Address, GLEASON & MASON,
Gleasonville, Tehama County, Cal.

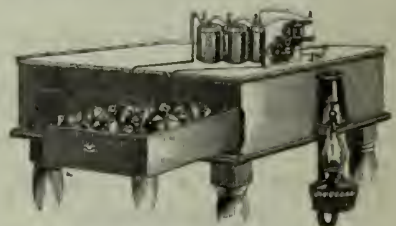
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HOUSES AND LOTS FOR SALE in this City, Oakland and Alameda. Lands and ranches for sale in all parts of the country. Agents in the principal cities. Collections made throughout the Coast.

No. 534 California Street.

MONEY in CHICKENS



If You Want to Make Money by raising any number of chickens, at any season of the year, without setting hens, for descriptive circular of the best, most practical, and most reliable Incubator in the world, address

EDWARD A. SAMUELS,
Waltham, Mass.

C. HERRMANN'S



FALL STYLE HATS NOW OUT!

At No. 336 Kearny St., bet. Bush & Pine,

— AND —

910 Market St., above Stockton,
SAN FRANCISCO.

Send for our Illustrated Catalogue.

Dewey & Co. { 202 } Patent Ag'ts.
{ Sansome St }

This paper is printed with ink furnished by Chas. Eneu Johnson & Co., 509 South 10th Philadelphia & 59 Gold St., N. Y.



Volume XVI.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 28, 1878.

Number 13.

A Chance to Exhibit California Dairy Products.

EDITORS PRESS:—I write now in reference to the coming international dairy fair, upon which you are doubtless well posted through the Eastern papers. I want to see California well represented in the exhibition, and I feel that through your paper and by personal effort you can influence your dairymen and manufacturers to make a good display. It will be of great interest to see cheese and butter produced in a district which not many years ago received the bulk of its supplies from the East. The fair does not take place until about the 1st of December, so that there is ample time. I will suggest to the committee that they offer a premium to your State, and I am confident it will be done.—J. H. REALL, New York City.

The suggestion is a good one. We ought to show the East that we are self-supporting so far as dairy production goes; and not only that, but we would like to trade back some cheese and butter for the heaps of gold which we paid them in former years. Although the chance to do this with profit does not now seem very bright, because the East is just as anxious to sell as we are, there is reason why we should be well represented at the great New York fair. It is an international fair, and not only will dairy products be sent from different parts of the world, but dairy purchasers for shipment to consuming countries will also be there. The Eastern dairy districts and the dealers in New York are now making a commendable effort to secure the South American trade instead of letting Denmark and France enjoy it undisputed. The *American Dairyman* learns from a French exchange that one French firm alone ships between six and eight million pounds of butter a year to Brazil, and the trade is carried on by other firms in France, not to speak of the famous butter canneries of Copenhagen. Now if the South American field is to be worked up, California should certainly take a hand in the effort; for if Brazil belongs to the East, there is also a west coast of South America which should be looked after, and that is our peculiar province. This effort to excel at the international dairy fair in New York is but a part of the general endeavor to make our dairy products better known abroad, which we have advocated during the last few months. There will be large premiums offered, and perhaps securing some of these will compensate individual exhibitors for the trouble and expense of shipping their sample cheeses and butter firkins. More than this, the advertisement which a good product will secure for our dairy resources will be of advantage to us in many ways.

We ask our dairymen to think the matter over and if any of them are disposed to send goods for the New York fair, let them make it known at the meeting of the California dairymen's meeting October 10th in this city. We shall be pleased to do all we can to help California exhibitors in getting their exhibits properly shipped to reach the fair in good order. As the fair does not come off until December 1st, the exhibits can be shipped in November and the weather is then so cool that cheese and butter can cross the continent in perfect condition without extra precaution. We shall be able soon to give information about the premiums to be offered in New York and whether, as Mr. Reall suggests, a special award is offered for California dairy products.

At Forest Grove, on the line of the Oregon and California railroad, fire destroyed 50,000 bushels, September 13th.

The Hairy Woodpecker.

The engraving on this page shows a pair of "hairy woodpeckers" (*Picus villosus*), common on this coast and widely distributed throughout the whole country. The birds are lively, noisy and fearless of men. In the South it may be seen at all seasons in orchards, among the trees of cities, along the borders of plantations, on the fences, on isolated fields, and in the densest

and states that on this coast we have the latter, except in the upper region of the coast, where the trend of the Rocky mountain range toward the northwest brings in the Eastern variety in Alaska. The habitat of the *P. Barrisii* extends westward from the Rocky mountains to the Pacific. Specimens found in New Mexico and southern California are slightly smaller than those of Washington Territory, but not noticeably so. The chief distinction between the two



THE HAIRY WOODPECKER (*Picus villosus*)

forests. It is even found in the salt marshes at the mouth of the Mississippi, where a struggling cotton tree or willow affords an opportunity for the exercise of its skill in boring. In the Northern States it disappears at the approach of winter and returns with the apple blossoms. In most parts of the Southern States it is quite familiar in winter, and comes boldly to the barnyard to glean its food, but is not regarded as very destructive or rapacious.

In his report on the birds of the Northwest, Dr. Coues notes two varieties of the hairy woodpecker; one *Picus villosus*, the other *P. Barrisii*,

varieties of the hairy woodpecker is in the color of the wing-coverts. The wing-coverts of the *P. villosus* are profusely white spotted; those of the *P. Barrisii* being scarcely or not spotted with white.

A COMMENDABLE ENTERPRISE IN SAN JOSE.—Bro. Herring, late of the *Agriculturist*, has charge of the Union Free Reading Room, San Jose. He is endeavoring to establish the institution upon an enduring basis for the benefit of all, and is making arrangements to continue to receive his old exchanges and to add many leading periodicals to the list,

The University Lectures.

We understand that it is now definitely determined to inaugurate the course of lectures on Special Cultures at the State University, by the appointment of Mr. C. H. Dwinelle as lecturer on Field Cultures. Mr. Dwinelle is well fitted, both by study and practice, to lecture upon these themes. He graduated in the course of agriculture in the Sheffield Scientific School of Yale College, in 1871. Returning to this State, he devoted some time to agricultural writing, and then embarked in the practice of agriculture. He is a close observer and an entertaining speaker. The course will begin about the 21st of October, after the mid-term recess, and continues through the present session.

There will probably be three lectures per week, on such days and at such hours as will accommodate the greater number of those who attend.

It is hoped, by a careful discussion of the natural history and value of plants of economic importance, and of methods and implements used in this and other countries in their treatment, to present facts of real importance to those who are now or who intend to be farmers.

The following heads will indicate in a general way the subject to be treated of, and the probable order in which they will be taken up, though that may be varied to suit circumstances, namely: farm implements and their uses; tillage, mechanically considered; irrigation; field and fruit cultures.

If sufficient interest is shown, it is intended to secure the services of competent specialists to treat of viticulture and dairying later in the year.

Although there are but two regular students prepared to attend these courses this year, a number of practical farmers have given their names as wishing to attend all of the lectures, or those bearing upon their specialties. All who wish to follow their example should write immediately to Prof. E. W. Hilgard, Berkeley. We trust that this effort to meet the wants of practical farmers will have encouraging support.

There are many young men and young women, graduates of excellent schools and colleges on this coast, who wish for a more thorough knowledge of the sciences bearing upon agriculture, but cannot afford the time and money required for a full university course. If these would spend a year at the University as special students, taking, in addition to these special lectures, enough of Botany, Zoology, Chemistry and Geology to fill up their time, we are sure that they would find it a profitable investment.

For the benefit of those who have lately come here, we will state that tuition in the University of California is free to all citizens of the State. Students from outside of our borders are charged a moderate fee.

CRANBERRIES.—Those who are working at the problem of growing cranberries in this State, and we have recently given items concerning several efforts of this kind, may be interested to know that the statistics presented at the last meeting of the New Jersey Cranberry Growers' Association, showed that the total production of the berries in the Eastern States, in 1877, was 400,829 bushels, and of this amount the shipments from the East to San Francisco were 9,113 bushels. This is the consumption here which local growers have a chance to supply. We believe the price of the berries in this market last winter ruled not far from \$15 per barrel.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eps.

Over the Mountains.

[Written for the RURAL PRESS by MRS. C. F. YOUNG.]

In the last part of June we found Truckee delightfully cool. A hundred snow banks in sight and a rain shower each day.

Messrs. Cruger & Co. have availed themselves of the unrivaled water-power on Truckee river for all the machinery necessary to manufacture doors, sash, shingles, blinds and furniture on a large scale. The same company control a large saw mill. The two establishments employ—when business is brisk—upwards of three hundred men. White men are employed at one-third larger wages than paid to Chinese, providing the white men will work as diligently.

Truckee is lively. It is a distributing office for several places. Stages depart daily, weekly and tri-weekly.

Verdi,

About on the State line of Nevada, has some dairy and potato farms near it. We saw a German who had just paid \$1,000 for 160 acres of United States confirmed-title sage-brush hills without timber or fire-wood, but within a mile of the railroad. Potatoes alone will in a few years make him independent. Already he had three acres planted, a snug house built and a barn nearly completed.

Down Truckee river from Verdi to Reno,

At every bend, where water could be conveniently carried, potatoes were growing. In quality, mountain potatoes average much better than any we can get from the bay, and command better prices. Californians must wake up; use fertilizers containing potash; must change seed, originate new varieties, and save both credit, crops and cash by the means.

Reno in 1869 was a hamlet in comparison with its present size. Then, land was cheap, now sage-brush land thickly covered with boulder rock, four miles out of town, is held at \$150 per acre. Reno is a city of gardens, vegetable and fruit. With water the hard, gravelly soil is wonderfully productive. Small fruits are simply perfect, and abundant; cherries, currants and gooseberries in particular. All hardy fruits do well. The clover meadows were lovely and gave promise of abundant harvest. The Towles took us out to a picnic at

Poplar Canyon,

Seventeen miles from Reno, on the 7th of July. Several families of old settlers were there. Some of them said we are paying 2% interest a month on money, with which to buy grain for our teams, food for our families and to pay wages to men. As elsewhere on the coast, making haste to be rich, people venture all on one crop. When that fails in field or market, down they go to bankruptcy or sheriff's sale. Two per cent. will add to the principal very fast. Suppose these clover farmers, who pay 2%, had each raised five acres of wheat, five acres of oats or barley, one of corn, two of potatoes, one of small fruits, strawberries, gooseberries, currants, a quarter of an acre of melons, cucumbers and squashes, a quarter of an acre of early potatoes, beets, carrots, radishes, parsnips, cabbage, peas and beans, a half acre in rows two and a half feet apart, cultivated by a horse with a small plow; suppose each family had set apart five acres of good clover land, on which to have kept the horse, three cows and their calves, 10 head of sheep and their lambs. Less than 20 acres for mixed farming would have supplied food of the best quality for both man and beast. People ask me how I know. Let me here say that my father was a thrifty German farmer, and we have tried it on a small and a large scale in a cold country on soil not as fertile as Truckee meadows. With German thrift, calculation and judgment, very few farmers would be obliged to pay interest on money borrowed for current expenses. We should mention that the reason of this distress is their failure to sell last year's hay. It was held over for higher prices. Unless

Stock Men.

From the country raided by the Indians, drive in cattle to feed next winter, prices of hay will not rule over \$15 a ton. The traders in town said we bursted the farmers. Their failures to pay compelled us to borrow money to meet our indebtedness below. Then we had subscribed to all sorts of public improvements, built fine houses, sent our sons and daughters to boarding schools. Surplus cash from previous years had gone into

Mining Stocks.

The bouanza kings have it. Now they laugh at our distress, and mock when our fear cometh. Our homes are mortgaged.

Should stocks go up, they may save themselves. We talked with working women who had put their whole year's wages into stocks and were distressed for rent money and milk. How much more sensible for each family to have had a little four-footed stock and dividends of foaming buckets of milk twice a day for the children.

Notes at San Jose.

EDITORS PRESS.—Catching the fever for a "change of base," I took the fleeting iron-horse to the beautiful and adorned city of San Jose. That portion known as the "Willows" has, since its clearance, made vast improvements in the productions of the soil and in fine residences. Fruit and vegetables grew extensively. Hands at Cee's hop yard are busy. The drying house, with its extensive floor, was covered and going through its heating process; completing in two days. Mr. Bird will soon set hands to gathering his hops. They look full and fair average size. Varieties of small fruit, blackberries, shrubs and ornamental trees were in thick profusion.

The District Fair Grounds appear with a new grand stand. Active preparations are made by its officers and members to make a fine display at its opening on the 30th of September.

Farmers were busy threshing and baling. Hay is plenty and low. Its quality is no comparison to the fine oats of Sacramento valley, which is generally conceded the best in the State. The ravages of the apple moth or miller is not yet underway.

Numbers I find are experimenting with the Egyptian corn for fodder and seed. It is meeting with good success. One grower stated that his turkeys and chickens are fond of the seed, as they will fly up and pick it off. It is also good to cook for table use. He expects to sow a large piece for fodder. It is to be out while growing, as I mentioned in my former notes.

One word on Bermuda grass—as to its seed. It sends out four long, thin prolegs, if left without cutting, but to propagate it quick roots are preferable, as too long a time would elapse in maturing them from seed. As you have shown it to be an assassin of the deepest dye, it also loves darkness rather than light. For it will persistently shove its head through the closest cracks. It fills the knots, spreading itself high without saying by your leave.

The Teachers' State Association will also hold a meeting here at the end of the month. Education is a vital question to the State, and needs encouragement and sustenance to foster its strength among the people everywhere.

GEORGE RICH.

Sacramento, Cal.

Hay, Straw, Tool and Stock Shelter.

EDITORS PRESS.—The California farmer does not need the tight and expensive barn, with interior departments for horses and cattle, such as are required by farmers in the northern States and are common in New England. A large corral divided into apartments and surrounded on two or three sides with economically constructed sheds for holding hay and sheltering stock, while the opposite side or sides of the corral is a high, tight fence, will best answer the purposes. The sheds should be framed, with double roof, 24 feet wide. Side up the outside all around with 16-foot boards on end, leaving pitching-in holes at convenient distances, these to be provided with sliding doors. Lay off the hay and straw store bays 16 feet wide, the entire length of the sheds; or leave spaces for driving through into the corral, and also spaces for tool and wagon sheds as may be convenient. The remaining eight feet all around the interior leave open for cattle, etc. Stalls or staunchions may be provided for work animals and cows, either with or without floors, in a portion of the eight-foot space. Such sheds on any large farm could be made to hold all the hay and straw from year to year, give shelter to all the stock during winter that could consume the same, and for fattening animals or for a dairy would be better than a tight barn. The corral should be turnpiked or ridged, and provided with thorough drainage in winter, to insure dry footing for stock. Let any farmer sit down and calculate the amount and cost of lumber to build such sheds to hold all his hay and straw and shelter his stock, and he will be convinced of the economy of this plan. The commonest kind of lumber, with split clapboards for a roof, will answer every purpose. Save your straw and shelter your stock.

S. H. HERRING.

San Jose, Cal.

Pump Wanted

EDITORS PRESS.—Please inform me through your columns, or otherwise, which is the best pump, and the best and most economical horse-power for my purpose. My well is 37 feet deep with water within 14 feet of surface, and my tank is 16 feet above the surface. I require water to irrigate three and one-half acres, and which my well will furnish. I am now using a 15-foot windmill, but it is not furnishing enough water, and will grow worse as the trees grow and shut off the wind. Please let me know also the probable cost of pump and power. Everything else being equal, a "tread power" would suit best, as I am cramped for space in the vicinity of my well.

J. J. B.

Savannah, Los Angeles Co., Cal.

[Who will speak from experience and help our correspondent to solve his problem?—Eps. PRESS.]

Raising Water Short Distances for Irrigation, Etc.

EDITORS PRESS.—There are tracts of land capable of producing abundantly, if water could be elevated to their surface from some contiguous lake, river or canal; and there are leveed islands now covered with water, and lowlands, lakes and ponds, which, if drained, would bring a rich reward to those who would cultivate them. In many of these cases an elevation of the water three or four feet would only be required. Almost every pump, or system of raising water, has much friction in its working, and elevates, in proportion to the force appended, too small an amount of water to be profitable.

Among the several systems of raising water used in the draining of Harlaem lake in Holland, was one so simple and economical as to be worthy of extensive imitation. There was placed in a canal a wheel of the same size and structure as the wheel behind the ordinary stern-wheel steamer, as seen at the wharves in San Francisco and along the rivers in the interior. On both sides of this wheel, at a foot or so from the wheel, there were planks placed, so that the water would not spread. Behind the wheel was an inclined plane, rising from the surface of the canal until the distant part was three or four feet above the canal. This inclined plane had planks on both sides to restrain the water from spreading. Upon the revolution of this wheel, the water of the canal was thrown with force upon the inclined plane. Its velocity being sufficient to overcome its gravity, it followed up the incline and entered a canal of higher elevation than the canal from which the water was taken. On this second and higher canal there was a wheel of the same size and structure, which, upon revolving, sent the water upon a second incline to a canal of greater elevation. In the draining of our marshes and upon some mining or irrigating canals, one wheel would give sufficient elevation for the purpose desired.

To illustrate the simplicity of this means of raising water for a few feet, let us suppose one of the stern-wheel steamers, now lying at our wharves, to be placed in a canal, with an inclined plane with sides planked, as before mentioned, erected behind the wheel. The steamer being made stationary, the revolution of its wheels would cause a rush of water up the incline, and the water would be discharged several feet higher than the canal from which it was taken. With a power not much greater than is required to drive a rotary pump whose discharge is but two feet in diameter, the paddle wheel of the steamer would send a current, at the rate of ten miles an hour, up an incline to the height of three or four feet, and discharge a stream over one foot in depth and twenty feet wide, or the width of the paddle wheel used.

The construction of the wheel and incline is within the capacity of any carpenter; and when a small amount of water is only required to be elevated a few feet, an endless chain from the wheel to an ordinary steam engine could be so arranged as to furnish an economical mode of raising water, but where a large quantity of water is required to be elevated, the construction of an engine and wheel similar to the stern-wheel steamer will be found desirable.

W. M. RYER, M. D.

Salinas Sundries.

EDITORS PRESS.—Threshing in Salinas progresses, but there is an enormous quantity of work still to be done. Last week I heard of machines still with engagements for 60 days ahead.

The yield from any given quantity of straw is so uncertain that contracts to thresh are not made at so much per bushel, as in former years. The average machine receives \$100 per diem, and supplies stack hands, and all necessary attendants, with both wages and board.

Grist also turn out most unsatisfactorily. The percentage of flour is only from 40% to 64% on the wheat milled.

Cash rentals are becoming the exception, shares being usually more equitable and satisfactory, both to landlord and tenant.

Stubbles are inferior and cheap, with small demand. A. J. Oughelstree has on stubble the finest band of steers west of the Gabilan range in Monterey county. It consists of 550 head, mostly four and five year old cattle, smooth and well-conditioned. He has also a large number of fat cows. Almost his entire stock of cattle is being brought on to stubble, as he wisely wishes to reserve the feed on his own ranch for an ample winter reserve.

E. BERWICK.

Monterey, Cal.

PRIZE FOR AN INVENTION.—Charles Bartlett, United States Consul at Guadalupe, informs the Department of State that the authorities of that colony have offered a premium of 100,000 francs to the inventor of a process to obtain a yield of over 14% from sugar cane. The competition is open until June 30th, 1880. It is not for an improvement on sugar mills, but for the discovery of a process bearing upon the yield of turbinated sugar. All the expenses of transit, putting up of machinery or implements are to be borne by the inventor.

HORTICULTURE.

Large Seckle Pears.

EDITORS PRESS.—I send you to-day per express a box of sample Seckle pears for your opinion. The smallest in the box is a fair average of all I raised. The enormous size of the larger ones is attributable to two of two causes, either to good and careful pruning and treatment of the trees, or else they have been trying to keep pace with the mammoth squashes that grew under the trees. I have had the orchard but about two years. Previous to my taking it, it had been very much neglected; in fact there appeared to have been no regard paid to pruning except to lop off the lower limbs with pruning shears to clear the way for the plow. In fact the cherry and pear trees looked very much like dilapidated cork-screws making an effort to bore holes in the clouds. I cut them down very severely. The former owner told me I was cutting them too much; that I was cutting off too much of the fruit. I told him the trees had too much surplus top, and were too high to pick the fruit with a profit, and that the fruit was small and inferior. I said that I would make firewood of the trees, or else make better fruit. He said I could not do that, as they never exceeded the size of a small hen's egg. I told him that if he came round the next fruit season I would show him some a little larger, and you can judge, from the sample sent you, whether I have succeeded or not, and all the fruit I have raised shows the same marked improvement.

I have sold the most of my pears to the Perter Bros. for the Eastern market.

I put a few small sized ones in the box, the others will mellow nicely in a week or so it laid away in some nice cool place, and when they do I think they will do credit to their appearance.

W. H. JESSUP.

Haywoods, Alameda county, Cal.

[These pears are certainly all that Mr Jessup claims for them in size. One which we measured showed a circumference of nine and three-fourth inches around the belt. The Seckle is classed as a small pear, and Mr. Downing's figure shows a circumference of five and seven-eighths inches. How much Mr. Jessup has improved upon the eastern model thus clearly appears. Many of the Seckle pears which come to this market are of the size borne by this orchard before Mr. Jessup pruned it. They are the size of hen's eggs, and small eggs at that. The enlarged fruit shows a very good flavor, and will show the eastern people something beyond what they are used to in Seckles, unless we are mistaken.—EDITORS PRESS.]

Riverside Peaches.

EDITORS PRESS.—A much needed enterprise has been successfully started here by the pluck of our fellow townsman, Wilson B. Russell. Last year he built a drying-house to cure raisins and other fruit. Now he is canning peaches and pays a cent a pound for the fruit on the trees. He will put up about 30,000 cans this season. This secures a market for our luscious peaches at home, and let me say here that specimens I have eaten of H. J. Rudisell's place and also of Rev. M. V. Wright's, surpass in size and flavor the best Delaware peaches I ever saw, and better than any I ever found in the San Francisco market during a residence of nearly nine years. One fact in reference to these extra fine peaches: they only had one irrigation during the season, but thorough cultivation. I am convinced all our people use too much water, and because it is abundant and cheap is no reason why it should be wasted. Peaches that have had too much water were forced in growth; pits separated from flesh; flesh cracked and bitter as wormwood in some instances. This irrigation problem will be solved by and by.

D. W. McLEOD.

Riverside, Cal., September 15th, 1878.

J. W. Briggs' Fruit Farm.

EDITORS PRESS.—I had the pleasure this morning of a short drive over Mr. Briggs' young fruit farm, three miles north of San Jose. His trees have made a fine summer's growth, and the place begins to present quite an orchardlike appearance. His large plantation of cherry trees, fronting the road, look especially fine. From young peach trees Mr. B. gathered me some of the finest peaches I have seen this year. But his plantation of the new strawberry, "Monarch of the West," attracted my attention by their bright thrifty appearance. I have not for several years seen plants looking so vigorous and thrifty; and their bearing qualities could hardly be excelled. Mr. B. informed me that within six months of the setting of the plants, sales of the berries netted him over \$1,200 for the two acres. That, I should think, would satisfy any reasonable man, these hard times. Mr. B. is so well pleased with them that he is plowing up all his old vines and putting in all the land he can to this variety. He has already several acres planted and growing well, hardly losing a plant, warm as the weather has been for transplanting.

After using all the plants he may want on his own grounds, Mr. B. says he will have a great many to spare, which he advertises in this paper.

Mr. Briggs has quite a large acreage planted in blackberries, mostly of young plants, however. From one plot of two acres of older plants he sold this season 450 chests of 100 pounds each; and at least 50 chest more could have been picked which rotted on the ground.

Among the recent improvements of the place I noticed a new artesian well, making the fifth now on the place. At a depth of 606 feet a flow of water was secured—well, it looked to me sufficient to run a small mill. G. W. M. Santa Clara, Cal.

Fruit Growing in the Foothills.

EDITORS PRESS:—In Mr. Elliott's statement of his success in fruit culture at New Castle, he excites our admiration and curiosity, and we are anxious to know something of his mode of cultivation, soil, locality, etc. He will therefore confer a favor if he will state what variety of grape it is that he gathers \$1.50 worth of grapes from the vine, and 700 vines to the acre. Where does he market the said grapes; also how he manages his one hundred and twenty peach trees on, seven-eighths of an acre, to make them bring him \$1,600, or \$1,700? What his method is of cultivating, what variety of peaches are they, what kind of soil he has them on and where does he market them? C. D. BROOKE. Diamond Springs, Sept. 9th, 1878.

SHEEP AND WOOL.

The American Merino.

We notice that our old friend, S. W. Jewett, now of Vermont, but an early resident of this State, has written an article on the American Merino for the *American Cultivator*. As this article contains points of historic interest with reference to our wool interest, we shall make the following extracts:

Sheep husbandry, for mutton and for the fleece alone, has been as much advanced during the last fifty years as other departments in the art of husbandry. Very few of the extensive importations of merinos from Spain, during this early period of our country's history, fell into careful and enterprising hands; since but faint encouragements were held out during these merino excitements in this country. The art of breeding was confined to a few individuals then, even in the old world. The knowledge of breeding was slightly discussed, and in this "new world" no marked skill was displayed, and but little attention given to the improvements of the breeds, after safely landing them upon our shores. Instead of visible improvements, deterioration, with backward steps, was the lot of this golden windfall, with a golden fleece, which had, through sheer necessity, been allowed to drift to our shores. Only a remnant of the best were driven out of Spain to save them from being consumed by the French soldiers under Bonaparte, in his raid into Spain in 1815.

Different characteristics were developed in as many different flocks, under different management, by the lords of Spain, which gave rise to the names possessed by each band, "Paular," "Escorial," "Infantado." It appears that no one breeder strove to pattern after the other. All of these valuable flocks were, under Bonaparte, destroyed, or scattered and bred up with the native sheep of the country, until those peculiar characteristics were lost on the Peninsula.

Previous to 1800, the King of France, Louis Philippe, and King George the Third, each received a present of some of the best merinos that Spain then produced, and these shipments were all that was ever allowed by the laws or consent of the country to leave the kingdom, before the 19th century. Lord Western, of Essex, near London, took in charge the flocks that were sent to Great Britain. His experiments with these and the long woolled mutton sheep ruined the peculiar merino characteristics that belonged to the race. A selection of 10 choice ones were forwarded from Lord Western's flock in 1843 to Mr. Jewett, of Vermont. Those presented to the King of France were divided. One-half being placed under the care of the government officials, the other half were presented to a friend, near Paris, who kept and bred them in-and-in for many years, making decided improvements upon the original gift. The one branch still exists at Rambouillet, and a remnant of the other fell into the hands of three careful shepherds, by the names of Gilbert, Cugnot and Guerin, all of which still prosper in their hands under careful governmental regulations.

The introduction of the still finer breeds of merinos from Germany, later on, in 1825, proved no blessing to this country, or to the American shepherd. The cross of the German or Saxony upon the Spanish, drove nearly all the original Spanish blood out of existence, and entailed upon our country those loathsome diseases, scale and foot rot in sheep, which are quite prevalent in some sections to this day.

After home manufactures and home demands for American fleece wool were well established, and some few flock masters discovered the in-

ducement and necessity of raising or growing more wool upon each sheep's back, to make wool-growing a paying institution—and knowing well that a germ only of the best Spanish blood was left in all the land, while none existed in Spain of this celebrated stock—diligent search was made all over the country to find and secure the very best wool-bearing animals, at whatever cost, without regard to size of carcass.

The writer of this article, and some few others, collected the best remnants that could be found, and soon established a reputation for breeding a better class of sheep, desirable animals that could improve the common flocks of the country. Our aim was not only to improve the symmetry and size of carcass, but to add more pounds of wool to fleece. The latter point seemed to be the most desirable and profitable of all, though all points of excellence have been kept steadily in view, for the 37 years, by all judicious breeders. Immediately the price of sheep for breeding advanced from \$3 to \$10, and the greater the premium or encouragements, the greater has been the stimulus and action, so that now \$25, \$50, \$100 and even \$500 is demanded, where sales have been made of the best sheep of either sex.

Forty years ago the common ordinary clip, throughout the best wool districts, did not average more than two, two and a half or three pounds of washed wool to each sheep, and it was quite rare to find a breeding ewe that produced a four-pound fleece. In 1840, in all probability, there were not in this country 1,000 breeding sheep, among the finer grades, that produced an annual fleece of five pounds, and not 200 Spanish sheep, of either sex that would yield a ten and a half pound fleece. As the demand in wool and sheep increased, and prices would warrant such an enterprise, all the wool districts, far and near, were ransacked to find even the smallest number of rare specimens. When gathered they were formed into a nucleus in Addison county, Vermont, to start and build upon.

Your correspondent was one among the very first to call the attention of the reading public to the fact that we held superior blood of Spanish origin, and allow me to say that I was the first in America to introduce before the world a model likeness of an "American merino" sheep, followed by a good description of what should be the model for breed. All of the necessary points required in the merino to carry a profitable weighty fleece were shadowed forth, combined with an iron constitution. At that time the proper characteristics were looked upon with disfavor and distrust by flock masters in general. But the record was made in the *Albany Cultivator*, over my own signature, and stands approved at the present day.

The first likeness of the "American merino," in print, was that of our ram "Fortune," which appeared in 1842. A good cut and sketch may be found in the transactions of the New York State Agricultural Society of that year, and fourteen agricultural papers were each supplied with an electrotype cut of this noted animal. This manner of introducing before the world the merits of this very perfect animal caused much inquiry, and stock of his get, usually numbering about 200, were repeatedly sold, and were soon found grazing in many States, east, west and south.

As the sheep interest increased and merchants came in from abroad, paying ten dollars for stock sheep, the effect was to multiply breeders of small lots of "Paular" merino all over this country. In a few years choice animals would readily command \$25 each at our own doors. This was considered an extravagant sum, and ruinous in the minds of narrow-minded people, while now \$500 for a single sheep is not even winked at, or scarcely mentioned in common circles. In 1844 about sixty merino ewes, unadulterated with Saxon merino cross, were found in Connecticut, then held by Stephen Atwood & Son. A majority of this flock were from time to time removed into Addison county, which proved a most desirable addition to the small flocks already on the grounds. At this time the flocks of Stickney & Robinson and Rich & Cutting, of Shoreham; Bingham of Cornwall; Hammond & Hall of Middlebury, were widely known and sought for.

About this period, say in 1846, a few sheep landed in Connecticut under the charge of Mr. Collins, who imported them from France. He purchased them from the government flock at Rambouillet. The Messrs. Bingham of Cornwall, and Jessie Hines of Brandon, Vt., crossed their home flocks with the Rambouillets. This family of sheep were more weighty in carcass and fleece, of a fine staple, and worthy of patronage by private citizen breeders, who have already been alluded to in this narrative.

It was in the years of 1850, 1852 and 1853 that your narrator visited the best private flocks in France, and secured, by contract, all the sheep they would then spare, and for the three following years, from their home flocks, at \$40 each per head, amounting in all to several hundred, which the writer imported in 21 shipments into Vermont, at a cost of not less than \$56,000. This blood, together with the ram "Fortune," found its way into a majority of the States in the Union, and some settled in Dom Pedro's dominions in South America.

John A. Taintor, of Hartford, followed in 1848, with small shipments of sheep drawn from private flocks in France. These merinos were still better bred than the government flock.

In 1859, 1860 and 1862 the writer shipped via Panama several lots to California. John D. Patterson, of Fredonia, N. Y., took forward the

first lot of French merinos, all rams, but was soon followed by Solomon W. Jewett, Rollin J. Jones & Co., and Alonzo L. Bingham. The shipping expenses alone must have cost these parties, in all, about \$80,000. The Hon. Rollin J. Jones took an early and decided interest in the breeding and sale of this race of sheep, and was one of the very best customers of the early stock and later importations of these popular breeds. To Mr. Jewett he paid about \$14,000 in good money for his Paular and French sheep. John D. Patterson ranks among the most successful sheep operators in the United States, thorough, persistent and efficient, though some others have made fortunes through this industry.

The Messrs. Hollister, Flint & Bixby, Beals & Baker, Hoyt & O'Connell, Solomon & Philo D. Jewett, are ranked among the best and most extensive and successful shepherds on the Pacific coast, possessing flocks in numbers varying from 20,000 to 135,000 of the merino race, producing fleeces more weighty than any found on record in bygone years, some breeding ewes yielding 20, and rams over 30-pound fleeces.

I spent the dry winter of 1877 at the "Merino Farms" of Solomon & Philo D. Jewett, near Bakersfield, California, and found them feeding alfalfa hay and barley grain to 18,000 large wethers, which in the spring were turned over to the butchers in San Francisco. The live weight of these wethers, merino blood generally, would exceed 130 pounds each.

[It must be remarked that the gentlemen named by Mr. Jewett are but few of the many who are entitled to mention for the size of their flocks, etc. Also, in order to make the sketch complete, there should be a recognition of those who are now laboring so faithfully and successfully in the breeding and distribution of improved merino sheep. Mr. Jewett's article is, however, interesting for the history of the early efforts which it contains.—EDITORS PRESS.]

THE DAIRY.

A Marin County Stock and Dairy Ranch.

EDITORS PRESS:—Mr. J. B. Redmond's stock ranch lies two miles west of Novato, Marin county, and is handsomely situated among the hills by which it is nearly surrounded, opening on the east toward San Pablo bay. It consists of 640 acres, the larger portion of which is hill land, the remainder level valley land of good quality. The buildings are neat, commodious and substantial; the surroundings pleasant and tasteful.

Mr. Redmond is an intelligent Irish gentleman of good parentage. From the age of 13 to 17 he attended an agricultural college in Ireland, when at the decease of his father he returned to take charge of the paternal acres. There for seven years he was engaged in stock-breeding, as was his father before him, and in the general routine of agriculture. At the end of this time he relinquished these pursuits and removed to South America, where he embarked in commercial enterprise, meeting with success. In 1848 he came to California, following mercantile pursuits successfully for many years, when, meeting with some reverses, he retired to his present home and has since been engaged in dairying and stock-breeding. A few years since Mr. Redmond was one of the most prominent breeders of Short Horns in the State, exhibiting annually at the State fair and winning many premiums. As an exhibitor he was noted for the excellent show condition of his cattle and the skill with which he could rapidly put flesh upon an animal and as rapidly take it off again, maintaining all the time good health and appetite. In this particular he is thought by some to excel all others in the State. In another respect Mr. Redmond stands alone also, that is in the theory and practice of in-and-in breeding. He has been successful. Few succeed, for rare, good judgment is needed in selection and determining the limit to which a cross shall be carried. The impress of his herd is seen to-day in many of the best dairies in Marin and Sonoma counties. The results achieved in his dairy testify the excellence of the system under judicious management.

The Dairy

Consists of 47 cows. The range is for the most part hill land, with a piece of bottom land at the foot. Walking through the pasture we saw a herd of cows that might serve as a dairyman's ideal. The first one noticed was "Trueheart 7th," a large red and white cow weighing 1,780 pounds, five years old. She has a very large udder, and has lost two teats through excessive flow of milk, but with the two remaining gives 51 pounds 7 ounces per day. "Petrel 4th," seven years old, gives 8 gallons and 1 pint per day, weighing 41 pounds 3 ounces, which is light. "Nymph" is one of the best in the herd. She is a 7-gallon cow. Her milk was set three weeks separate and she averaged 14 pounds 2 ounces of butter per week. She is a full sister to a cow owned by Capt. Allen, which exceeded this one in yield of milk and butter, and was at the time advertised for sale in the *RURAL PRESS*. She has a three-year-old heifer that gave 10½ pounds of butter per week, and a two-year-old heifer that has lost two hind teats from excessive flow of milk and now gives 3 gallons per day. "Nymph 3d," sister to "Nymph 7th,"

has also lost two teats and gives 5 gallons and 3 quarts per day. Milk has been developed so that some of the heifers are taken up six weeks before calving and milked three weeks once a day and three weeks twice a day, to prevent fever and loss of bag. "Nymph 3d" has a yearling heifer, the sixth cross, which is exceedingly well developed and has never had extra feed or shelter. "Damsel 3d" is one of the crack butter cows of the State, making 13 pounds of butter per week five months in the year. Her dam, "Damsel 1st," was out of "Lady Sefton," she out of "Nymph 1st." "Damsel 3d" was a sister to "Lolo Rooth," the bull son of "Water Prince," she herself was got by Harold 8th," owned by John Brewster, of Galt, Sacramento county. "Bertha 27th," one of the first cows, a handsome roan and a good milker, has taken many premiums in years past at the State and San Francisco fairs.

The two families comprising the larger number of the herd are the "Truehearts" and the "Nymphs." "Trueheart 1st" was out of "Lady Sefton," by Booth's "Lord of the Valley" (English herd book). "Nymph's" dam was "Favorite;" grand dam, "Prairie Rose," by "Prophet," 845 (American herd book); great grand dam by Westchester, 1089½; great great grand dam by "Splendid," 1161, and the great great great grand dam "Yellow Rose," by "Young Denton." Such is the pedigree and such as given is the dairy performances of this herd.

Careless handling by hired help has partly spoiled five of the most valuable. "Water Prince" and "Lolo Rooth 4th" were used in breeding, both of which are dead, the latter being lost by overheating in driving to the Petaluma fair in 1877. "Water Prince" was imported by J. B. Redmond through John Parrott, San Mateo. "King of Hearts" and "Little Pat" are two young bulls less than a year old, both very promising. In

Breeding In-and-In

Good judgment is required, or it may be carried too far. It is not safe to carry it beyond the third cross with some cattle, though several of the crosses in this herd are the seventh. The disposition, constitution, health and habits must determine the extent and the selection. For instance, a dull-eyed, sluggish, sleepy animal or one in poor health, should not be crossed with a close relative.

Below is given a table showing the number of pounds of butter made in 35 days from 47 cows. It must be remembered that five of these cows are injured for dairy purposes by the loss of one or more teats, and also that of the entire number nearly one-half are two, three and four-year-old, not yet in their prime. The butter was sold as soon as made. The table shows the number of pounds of butter sent to market at specified dates, extending over a period of 35 days, all of which was made in that time, besides which there was enough made for table use in a family of eight persons.

April 16th.....	478 pounds of butter
" 23d.....	300 " "
" 30th.....	496 " "
May 7th.....	396 " "
" 14th.....	400 " "
" 21st.....	494 " "

Total number of pounds, 2,464; average number of pounds made by each cow in 35 days, 52.20-47; average number of pounds made per day by each cow, 1.75-2.

All things considered, this is a very good performance for this herd. No extra feed was given them; they ranged over a good pasture. It shows the value of the thoroughbred as a dairy cow. High grades are nearly as good and may be readily acquired by the dairyman of moderate means with time and skill in breeding.

While waiting the development of a foreign market, dairymen can not do better than to work their herds of common stock up to high grades. Formerly anyone with industry and slight experience could realize good profits from very ordinary stock. To-day it is quite different. Rents are high, markets limited and prices low. To counteract this state of things, thought, discussion and organized effort is needed. "Development" must be the password to a return of prosperity; development in the pasture, development in the herd, development in the processes of management, and development of foreign markets by united action.

Dairy Appliances.

Mr. Redmond's conveniences for making butter are very good. His dairy-house is a handsome wooden structure with a raised roof projecting at the sides and ends. The walls are double, filled in between with sawdust. The house is well lighted with several windows, well ventilated and divided into two compartments, one for setting milk and the other for churning, working and molding. The foundation of the building is a stone wall 2½ feet thick, and underneath is a cellar 16x32x9½ feet.

In the dairy-house operations are carried on in a manner calculated to lend charms to the occupation aside from those inherent. Three young ladies, Mr. Redmond's daughters, assume the duties of dairymaids, introducing the utmost order and neatness. Under their deft manipulation the butter is worked, shaped and molded into handsome rolls of most delicate flavor. Each roll is branded with the name "Mary," leaving a golden impress upon the roll, which surely deepens in the mind of the consumer who is favored with this delicious product of exquisite skill. The brand is sought after in market and commands the highest price, as is evidenced by the returns of the commission merchant. H. E. HALLETT.

CALIFORNIA STATE GRANGE P. OF H. DIRECTORY.

Officers of the California State Grange for 1878-9.

Table with 2 columns: Position and Name. Includes Master (J. C. Steele), Overseer (B. R. Spillman), Steward (Nelson Carr), and others.

EXECUTIVE COMMITTEE:

Table with 2 columns: Position and Name. Includes J. C. Steele, Chairman; B. R. Spillman, Secretary; and others.

[Compiled from Secretary's Official List, Printed April, 1878.]

SUBORDINATE GRANGES.

Large table listing subordinate granges with columns: NAME, NO., MASTER, SECRETARY, POST-OFFICE, COUNTY. Includes entries like Azusa, Antelope, Adams, etc.

Continuation of the subordinate granges table, listing names like Yolo, Yuba City, Yountville, etc.

*Officers for 1877; not reported for 1878.

Meeting of the State Grange.

The next meeting of the State Grange will be held in Sacramento on Tuesday, the 1st day of October, 1878, at 10 o'clock.

AMOS ADAMS, Secretary State Grange.

State Grange Meeting.

The State Grange will meet in Sacramento on Tuesday of next week, October 1st. It is hoped that every Master of a subordinate Grange and his Matron will arrange to be present, because the meeting will be one of unusual importance.

All fourth degree members, properly vouched for and proficient in the secret work of the Order, are entitled to receive the fifth degree, Pomona, in the State Grange.

Any fourth degree member in good standing can be elected to any office in the State Grange, or, in fact, in the National Grange.

The fifth degree has usually been conferred in the State Grange on Friday. We would recommend that Patrons wishing to take the degree notify the State Secretary as early in the session as convenient.

Patrons from all parts of the State will add interest to this Pomona feast by sending samples of their products for display and use at the feast, directed to "Pomona Feast, care of Grangers' Co-operative store, corner of 10th and K streets, Sacramento," with their names and

addresses, and names of the articles contributed.

As it is not yet positively known in what building the State Grange will meet, we advise Patrons to examine the daily papers for a statement of the location, or inquire at the co-operative store above named. The hour of meeting will be 10 A. M.

Granges in arrears for dues for one quarter or more are not entitled to representation. Granges in arrears to the State Grange can be represented by presenting their quarterly reports to the Secretary and paying up their dues at the State Grange meeting.

Representatives to this State Grange are entitled to receive payment by their own Grange for their actual and necessary expenses in attending the State Grange.

Sacramento Grange is taking active steps to provide good accommodation for the State Grange, and make the session a pleasant as well as profitable season. Something more than fruit supplies are hinted at for the Pomona feast. Appropriate songs and music it is expected will prove a desirable feature of each meeting. We expect to see some foothill, as well as other Granges, represented, who have not always filled their seats in the State Grange heretofore.

Let the members not only come with suggestions for the good of the Order, but with well matured plans properly written for adoption. Every session, many good propositions are lost merely for the want of proper presentation or the lack of time to suitably prepare them for adoption.

At the regular meeting of Temescal Grange, October 7th, J. V. Webster offered his resignation as W. M., on account of his contemplated absence at the State Constitutional Convention.

A vote of thanks was tendered for his able services and many kind remarks were expressed. The worthy Overseer, P. H. McGrew, was elected Master, and Sister L. Frink, Overseer. Both were duly installed by Bro. Webster.

THE ATTENTION of stockholders should be given to the notice of the meeting of shareholders of the Grangers' Bank of California, which is to be held on Tuesday, October 8th. A full attendance should be had.

EXPERIMENTS with war balloons are being made at Woolwich, England. Telephones are used to communicate with the captive balloons.

THE Paris exposition will close on the 31st of October.

*Officers for 1877; not reported for 1878.

The State Fair of 1878.

As we intimated last week, the California State fair for 1878, which was held last week at Sacramento, was a grand success in point of exhibits, attendance, and in minor considerations which go to make up a successful exhibition. The financial summary of the fair is given by the *Bee* as follows: The receipts of the fair for the entire week was as follows: Received at the park, \$14,269; at the pavilion, \$6,070.60; total, \$20,339.60. The total receipts for 1877 were as follows: Park, \$10,557.25; pavilion, \$5,359.55. This leaves an excess in favor of this year of \$4,422.80.

In a letter from our correspondent, Mr. Rich, will be found mention of some of the exhibitors of live stock; others will be found named in the official premium list which we print below:

Premiums Awarded at the State Fair.

Sheep.

Spanish Merino—J. H. Strowbridge, Hayward's; L. U. Shippee, Stockton. French Merino and Silesian—Mrs. R. Blacow, Alameda. Leicestershire, Shropshire, Lincolnshire—F. O. Staples, Solano; R. P. Saxe, San Francisco; Mrs. R. Blacow, Alameda. Grades—George M. McCracken, San Jose. Sweepstakes—J. H. Strowbridge, Hayward's; Mrs. R. Blacow, Alameda. Cotswolds—George M. McCracken, San Jose. Cross between Thoroughbreds—Mrs. R. Blacow, Alameda; R. P. Saxe, San Francisco. Southdowns—George Bement, St. Helena.

Goats.

Thoroughbreds—Hall & Harris, San Benito; the Gilmore Angora Goat Breeding Association, El Dorado county; E. D. Shirland, Auburn; Landrum & Rogers, Watsonville. Graded—E. D. Shirland, Auburn. Sweepstakes—Hall & Harris, San Benito; E. D. Shirland, Auburn; Landrum & Rogers, Watsonville; the Gilmore Angora Goat Breeding Association, El Dorado county.

Horses.

Thoroughbred—Stallions—Four yrs old and over, Theodore Winters' Norfolk; 3 yrs, Theodore Winters' Frank Hastings; 2 yrs, J. B. Chase's Norfolk; 1 yr, Theodore Winters' colt; under 1 yr, W. H. Coombs' colt. Mares—Four yrs and over with colt, T. Winters' Marion; 4 yrs and over, W. Boots' Miami; 3 yrs, H. R. Covey's Carrie C; 2 yrs, E. J. Baldwin's Experiment; 1 yr, J. A. Cardinelli's filly; under 1 yr, T. Winters' filly. Families—Sire with 5 colts, T. Winters' Norfolk; thoroughbred dam with 2 colts, W. Boots' Miami; stallion, other than thoroughbred, with 5 colts, D. M. Reavis' Blackbird; dam, other than thoroughbred, A. L. Chapman's Black Maggie. Graded—Stallions—Four yrs old and over, M. Briggs' R. A. Carey; 3 yrs old, A. L. Chapman's Jack Downing; 2 yrs, W. Quackenbush's Bayswater. Mares—Four yrs, A. L. Chapman's Lady Norfolk, with colt; Ben. C. Harris' Belle Brown; 3 yrs, A. L. Miller's Bessie Sargent.

All Work—Stallions—Four yrs, L. A. Shippee's Henry Clay; 3 yrs, John Mackay's Great Western; 2 yrs, F. Babbie's Fred. Babbie. Mares—Four yrs, with colt, Major Beck's Joey Hill; 4 yrs, E. Comstock's Coley; 3 yrs, D. M. Reavis' Annie Hall; 2 yrs, D. M. Reavis' Lady Hickox.

Draft—Stallions—Four yrs and over, E. J. Lockwood's Eureka; 3 yrs, M. C. Fisher's Wallace; 2 yrs old, W. Gee's George Bruce; 1 yr, J. A. Painter's Balgray. Mares—Four yrs and over, R. J. Markey's Nelly; 3 yrs, E. Comstock's Maud; 2 yrs, E. Comstock's May.

Roadsters—Four yrs and over, D. M. Reavis' Blackbird; 2 yrs, J. L. Rose's Sultan; 2 yrs, M. W. Hicks' Sultan. Mares—Four yrs, J. Mackay's Bloomfield Maid; W. Johnson's Medora; 2 yrs, M. W. Hicks' Carlotta.

Sweepstakes—Stallions—First, H. C. Judson's Wild Idle; 2d, S. H. Titus' Echo. Mares—D. M. Reavis' Nelly; Theo. Winters' Marion.

Cattle.

Durhams—Bulls—Four yrs and over, 1st, C. B. Hensley's Mason Duke; 2d, Colonel Younger's Red Thorndale; 3 yrs, 1st, Colonel Younger's Aldrie Thorndale; 2d, Jesse D. Carr's Duke of Gibraltar; 2 yrs, 1st, Jones & Haggin's Oxford Duke; 2d, Jesse D. Carr's Sixth Duke of Gabilan; 1 yr, 1st, Jesse D. Carr's Maynard; 2d, Jones & Haggin's Duke of Alexander. Bull—Calf—First, Colonel Younger's Fourth Red Thorndale; 2d, D. M. Reavis' Thirteenth Duke of Chico. Cows—Four yrs and over, 1st, E. A. Bridgford's Flora Hastings; 2d, Jesse D. Carr's Pet of Geneva. Cow and calf—Jesse D. Carr's Third Maid of Monterey; 3 yrs, 1st, Jones & Haggin's First Louan; 2d, Colonel Younger's Rose Nell; 2 yrs, 1st, Colonel Younger's Dolly Thorndale; 2d, N. Wick's Frankie Louan; 1 yr, 1st, Jones & Haggin's Jesse Maynard; 2d, Colonel Younger's Red Dolly.

Jerseys—Bulls—Four yrs and over, Major Beck's Touchstone; 2d, J. McM. Shafter's Sunrise; 3d, N. McDonald's Duke Alexis; 3 yrs, 1st, J. W. Critch's Duke of Breden; 2d, R. Noel's Paragon; 2 yrs, F. J. Barretto's Calomet; 1 yr, F. J. Barretto's Blythe. Cows—Cow and calf, B. Noel's Fannie; 4 yrs, 1st, Major Beck's Olive; 2d, T. J. Barretto's Beauty of Ipswich; 3 yrs, 1st, T. J. Barretto's Lady Ethel; 2 yrs, 1st, P. Stanton's Ione of Sacramento; 2d, J. McM. Shafter's Olima; 1 yr, T. J. Barretto's Josephine.

Devons and Ayrshires—Bulls—Three yrs, 1st, R. McEneaney's Blucher; 2d, P. Coutts' Scarbro Chief; 1 yr, G. Bement's Laura Todd. Cows—Cow and calf, P. Coutts' Maggie Douglas; 3 yrs, P. Coutts' Maggie Douglas. Cows took all the premiums in this class.

Herds—Thoroughbred—First, Colonel Younger; 2d, Jesse D. Carr; under 2 yrs, Jones & Haggin. Sweepstakes—Best bull, 1st, Jesse D. Carr's Sixth Duke of Gabilan; 2d, Colonel Younger's Red Thorndale; best cow, Colonel Younger's Rosa Nell.

Swine.

Essex and Berkshire in One Class—Boar, 2 yrs and over to Kentucky, owned by Alfred Parker, of Bellota. Boar under 2 yrs, Commodore, owned by John Rider, of Sacramento. Boar, under 1 yr, Dandy Jim, owned by Alfred Parker, of Bellota. Breeding sow, Princess of Wooddale, owned by John Rider, of Sacramento. Sow, under 1 yr, Hattie of Linden, owned by R. P. Saxe, of San Francisco. Pair of pigs, under 10 mos, owned by John Rider, of Sacramento.

Poland-China and Chester Whites in One Class—Boar, under 1 yr, to Sam, owned by Robert Roberts, of Grafton. Breeding sow, Nellie, owned by Robert Roberts. Sow, under 1 yr, Betty, owned by W. C. Thomas, of Woodland. Pair of pigs, under 10 mos, owned by Robert Roberts, of Grafton.

Sweepstakes—Boar, of any age or breed, to Commodore, owned by John Rider. Sow, of any age or breed, Black Queen, owned by Mike Bryte. Pen of 6 pigs, owned by F. Comstock, of Yolo. Family, of same breed, by John Rider.

Poultry.

Trio of light Brahmas, to Mrs. C. H. Sprague, of Woodland; also to same, for trio of dark Brahmas. Trio of white Cochins, John Herrings, of Sacramento. Trio of game chickens, Petter Chatterdon, of Sacramento. Trio of Silver Spangled Hamburgs, Mrs. C. H. Sprague, of Woodland. Trio of brown Leghorns, Sam Blair, of Sacramento. Trio of black Spanish, F. S. George, of Sacramento. Trio of Plymouth Rocks, Sam Blair, of Sacramento. Trio of Golden Polish, Mrs. C. H. Sprague, of Woodland; also to same for trio of game Bantams; also to same for trio of Golden Bantams. Pair of Rouen ducks, erected, W. Kirth, of Sacramento. Display of fowls by one exhibitor, Sam Blair.

Machinery, Implements, Etc.

Class 1—Machinery, engines, etc.—M. C. Hawley & Co., M. R. Rose, L. L. Lewis & Co., Huntington, Hopkins & Co., Sacramento; R. A. Sarle, San Francisco. Class 2—Agricultural machines, 1st division—T. C. Churchman, M. C. Hawley & Co., Frank Bros & Co., Huntington, Hopkins & Co., O. A. Davis, Sacramento; Byron Jackson, Woodland; Sweepstakes Plow Company, San Leandro.

Class 3—M. C. Hawley & Co., Sacramento Plow Company, M. Miller, Wm. Gutterberger & Co., Frank Bros & Co., Sacramento; Byron Jackson, Woodland; James Harris, San Francisco; F. J. Burke, Amador City; Nehr & Co., Roseville; Wm. Bowles, Brighton; Sweepstakes Plow Company, San Leandro; E. E. Ames, San Leandro.

Class 4—L. H. Woodin, Nash & Klees, Huntington, Hopkins & Co., A. O. Davis, Sacramento; Bower & Reed, Marysville; Sweepstakes Plow Company, San Leandro.

Class 5—Tools and household implements—T. C. Churchman, M. R. Rose, Wm. Gutterberger & Co., Frank Bros & Co., Huntington, Hopkins & Co., Mrs. J. W. Mandeville, Sacramento; George S. Follansbee, San Francisco.

Class 6—Plows—M. C. Hawley & Co., Frank Bros & Co., Sacramento; Sweepstakes Plow Company, San Leandro. Class 7—Vehicles—California Carriage Manufacturing Company, J. F. Hill, Johnson & Blue, Sacramento; Sweepstakes Plow Company, San Leandro.

Miscellaneous—Vehicles, machinery, etc.—W. F. Frazer, H. D. Boyer, Clark & Davis, Wm. Kirkendall, J. B. King, Sacramento; Byron Jackson, Woodland; James Harris, San Francisco; G. T. Brown, Stockton; H. L. Bass, Modesto; D. A. Falkner, Centerville; Bachelor Manufacturing Company, Napa; J. R. Crandall, Placer county, Cal.

Textile Fabrics and Materials.

Class 1—Carlson & Currier, G. A. Veanny, San Francisco; Capital Woolen Mills, Mechanics' Store, Huntington, Hopkins & Co., S. J. Nathan & Co., Sacramento; Mrs. A. J. Stevens, Elk Grove; Mrs. C. W. Lusk, Placerville; Mrs. E. D. Shirland, Auburn.

Juvenile Department—Lillie Cutter, Alice B. Lawson, Annie Hubert, Mercy Farnsworth, Percy E. Farnsworth, Miss R. Eighney, Ella Lansing, Jennie McCashin, Clara Keeber, Mrs. A. Cadogan, Clara Cadogan, Emily Schroth, Emily A. Boyne, Lavinia Greenlaw, Mattie Huhbs, Miss P. C. Brown, Minnie J. Roth, Eveline Hamburger, Emma N. Hartwell, Nellie Keeber, Howard W. Bassett, Minnie Kuhl, Sacramento; Amelia Behrens, Dixon.

Class 2—Manufacturers of leather, rubber and paper—Mechanics' Store, J. J. Lusser, Sacramento; Turning and Manufacturing Company, James Parsons, C. H. Krebs & Co., W. A. & C. S. Huntington, Sacramento.

Class 3—Needlework, waxwork, clothing, hats, caps and furs—Huntington, Hopkins & Co., Emma Coppin, Mrs. F. C. Neal, J. F. Slater, Mrs. J. H. Roberts, Carrie Schroth, Mrs. H. Weinrich, Sarah Cohen, Emma Waldron, W. F. Preston, J. D. Cluniger, Mrs. O. Walther, Manie Batchelor, Mrs. E. Hopfey, Mrs. James Lansing, Mrs. W. M. Lyon, Mrs. W. A. Houghton, D. H. Quinn, the Misses Brothers, Mrs. W. W. Marvitz, S. J. Nathan & Co., L. Bien, J. Neubauer, Mary Shields, Katie Weil, Mrs. J. H. Winn, Mrs. J. H. Carroll, Mrs. J. H. Roberts, Mrs. Parker, Mrs. O. Walther, Gertrude Gerrish, Mrs. Hawkins, Mrs. M. Pease, Mrs. E. Hone, Mrs. M. Cole, Katie Quinn, Mrs. W. A. Houghton, Sacramento; Mrs. Dr. R. S. Markell, Yolo; Mrs. A. G. Nye, San Francisco; Mrs. J. H. Madden, Dixon; Mrs. Sullivan, San Francisco; Mrs. A. J. Kennedy, Placerville; Mrs. T. Hurtzig, Forest Hill; Mrs. Adamson, Davisville; Mrs. Kaller, Nevada City; Mme. Mourgeanna, San Francisco; Mrs. Peterson, Sutter Creek.

Mechanical Products.

Class 1—Manufacturers of leather—Clark & Davis, Geo. Greiner, S. J. Nathan & Co., Sacramento; Main & Winchester, Sherman, Hyde & Co., San Francisco. Class 2—Worked metals—George T. Bash, H. Wachhorst, L. L. Lewis & Co., Huntington, Hopkins & Co., Holbrook, Merrill & Stetson, J. G. McBride, Sacramento; Main & Winchester, San Francisco.

Class 3—Stoves, casting, etc.—Holbrook, Merrill & Stetson, George Miller, L. L. Lewis & Co., Sacramento; S. R. Lippincott, H. L. Howe, San Francisco.

Class 4—Cabinet ware, furniture, school furniture, billiard tables, etc.—J. G. Davis, John Breuner, Sacramento; Jacob Strahle, Pacific Spring & Mattress Company, San Francisco.

Class 5—Wooden ware—William Bateman, Nichols & Co., Adams, McNeil & Co., Sacramento. Class 6—Sporting, surgical instruments, etc.—Dr. G. A. Stephenson, H. C. Kirk & Co., H. Eckhart, Sacramento; Robert Reed, Oakland.

Class 7—Chemicals, oils, paints, etc.—Whittier, Fuller & Co., F. M. Leef & Co., H. C. Kirk & Co., California Paint Company, Whittington & Bayley, Sacramento; Sullivan, Kelley & Co., Lavenson, Winters & Co., Bowen Bros., San Francisco.

Class 8—Glass, crockery, marble work, stoneware, pottery, etc.—Aitken & Fish, William Brown, Whittier, Fuller & Co., H. C. Krebs & Co., George Miller, Sacramento; Mrs. M. B. Culver, Calistoga.

Class 9—Minerals, fossils, birds, fishes, etc.—C. M. Procter, J. Hoehn, Sacramento; R. W. Jackson, San Francisco; E. Ivey, Washington.

Farm Products, Food Condiments, Etc.

Class 1—Silk, cotton and tobacco—C. S. Lowell, Sacramento; O. A. Davis, Yolo; Manuel F. Manix, Newcastle. Class 2—Flour and grain—F. P. Lowell, John Smith, Joseph Sims, R. J. Merkley, A. D. Miller, Sacramento; Marion Biggs, Butte county; George Bement, Napa.

Class 3—Vegetables, roots, etc.—B. Bursi & Co., A. Henly, D. Debernardi, Felici Gabrillo, O. Goodrich, John Smith, William Fern, B. Duacan, E. F. Aiken, Sacramento; J. F. Elliott, Yolo.

Class 4—Flowers and plants—F. A. Elbe, Mrs. F. H. Williams, Sacramento; F. A. Miller, San Francisco; James Hutchinson, M. F. Ludeman, Oakland.

Class 5—Cheese—McLaughry & Rider, W. Kerth & Co., Sacramento. Class 6—Butter, bread, etc.—Mrs. J. P. Odbert, W. F. Peterson, Mrs. R. K. Wick, Mrs. Wm. Bassett, Mrs. E. F. Aiken, Nellie Burnes, Angella Cadogan, Schroer Bros., Mrs. Peter Burns, Sacramento.

Fruits.

Class 1—Green fruits—O. O. Goodrich, Sacramento; D. C. Young, Sonoma county; E. M. Smith, Coloma; I. S. Bamber, El Dorado; Mrs. M. Blacow, Alameda; Hugh Quinn, Tuolumne.

Class 2—Honey, preserves, etc.—Mrs. J. Lansing, Kitty Henley, Angella Cadogan, Mrs. F. A. Ebel, Mrs. E. F. Aiken, Ida Chisholm, Sacramento; J. S. Harbison, San Diego.

Class 3—Brandy and wines, dried and preserved fruits, etc.—E. F. Aiken, J. Knauth, George A. Deitz, Johnston Brandy and Wine Company, C. S. Lowell, James Rutter, Brighton, Distillery, Sacramento; R. B. Blowers, Woodland; I. S. Bamber, El Dorado; D. C. Young, Sonoma; Thomas Hardie, Coloma; J. C. Wood, Mission San Jose; Robert Chalmers, Coloma; L. J. Rose, San Gabriel.

Fine Arts.

Class 1—Paintings, photography, drawings, etc.—J. Asher, L. G. Jordan, Sacramento Business College, Miss Kate Almond, Mrs. Julia E. Dunn, Mrs. E. C. Binney, G. V. Smith, Sacramento; L. Lusser, San Jose; Norton Bish, C. D. Robinson, Mrs. M. E. Stovall, Miss L. Williams, Hamilton & Jackson, San Francisco; D. H. Woods, Washington; Miss Agnes Rutter, Florin; A. Schrader, Oakland; A. P. Hill, San Jose.

Class 2—Sculpture, statuary, etc.—Alken & Fish, Ackerman & Co., Sacramento; G. Griffith, Placer county. Class 3—Paintings by minors—Clara Holt, M. C. Loomis, Sacramento.

Miscellaneous Department.

Fancy goods, rare plants, orange trees, grasses, stationery, mattress material, toilet articles, needlework, ornaments, books, mixtures, etc.—C. W. Rapp & Co., Aldrich & Harper, John Smith, George Rich, Mrs. Charlotte Major, Miss Willie Wilcox, Mrs. J. W. Mandeville, Ackerman

& Co., W. McGraw & Co., F. Woodward, Wilcox, Felter & Co., M. S. Hammer, W. A. & C. S. Houghton, Sacramento; Thomas G. Garey, Los Angeles; J. Peter, Mme. Mourgeanna, J. Herzog, Louis Hess, San Francisco.

Gold Medals.

First Department—Live Stock—Most meritorious exhibit to Colonel Coleman Younger, San Jose. Other gold medals have not been awarded.

The Races.

No. 1—Trotting, 2:26 class; purse, \$1,500; first horse \$900; second, \$450; third, \$150.

John Williams names s. g. Graves.....2 1 1 1
Chas. Marvin names g. Abe Edgington.....1 2 3 3
Wm. Doty enters br. g. Doty.....5 3 2 2
W. H. Cade enters br. g. Dirigo.....4 4 4 4
O. A. Hickok names ch. m. Coquette.....3 5 dis.
L. J. Rose names blk. m. Beautiful Bells.....dis.
Time—2:25, 2:26, 2:24, 2:27.

No. 2—Trotting, 2:40 class; purse, \$500; first horse, \$250; second horse, \$150; third horse, \$100.

M. W. Hicks names br. m. Corsaire.....3 3 1 1 1
John Williams names br. g. Harry.....2 1 2 2 2
P. W. Nunan names br. m. Lady Emmet.....1 2 3 3 3
T. Kennedy names br. g. Proctor.....4 5 dis.
J. Mackay names b. h. Monarch.....5 4 dis.
E. Rix names ch. s. Goldfinder.....dis.
Time—2:31, 2:30, 2:24, 2:31, 2:32.

No. 3—Running; mile heats for untied three year olds; \$100 entrance; \$50 forfeit; \$350 added; second horse saves entrance money.

L. R. Martin names E. J. Baldwin's b. f. hy imp. Glenclg.....1
M. M. Allen names br. f. Georgia A.....dis.
Time—1:45.

No. 4—Running; mile dash for two year olds; \$50 entrance; \$25 forfeit; \$250 added; second horse saves entrance money.

Henry Schwartz names s. f. Jessie R.....1
L. R. Martin names E. J. Baldwin's ch. f. by imp. Glenclg.....2
Col. W. W. Gift names b. f. Twilight.....3
W. L. Pritchard names s. c. Richard Third.....4
L. R. Martin names E. J. Baldwin's ch. c. by Lexington 5
W. P. Barnes names s. c. Jim Farley.....6
Time—1:40.

No. 5—Running; mile heats, free for all; purse, \$1,200; first horse, \$720; second horse, \$360; third horse, \$120.

W. L. Pritchard names ch. m. Lena Dunbar.....1 1
George Treat names b. c. Lottery.....3 2
E. J. Baldwin names b. f. Clara D.....2 3
Thos. Atchison names b. f. Maggie S.....4 4
Time—1:44, 1:42.

No. 6—Trotting, 2:23 class; purse, \$1,000; first horse, \$500; second, \$250; third, \$150; fourth, \$100.

W. F. Knox names ch. h. Nutwood.....1 1 2 2 1
L. J. Rose names b. g. Tommy Gates.....2 3 1 1 2
Wm. Doty names br. g. Doty.....3 2 3 3 3
A. F. Smith names ch. g. Pat Hunt.....dis.
Time—2:24, 2:24, 2:27, 2:26, 2:26.

No. 7—Trotting; free for all four year olds and under; purse, \$600; first horse, \$360; second horse, \$180; third horse, \$60.

A. Newland names g. s. Poscora Hayward.....1 1 1
Gleeson & Cannon names b. m. Belle Davis.....2 2 2
J. T. McIntosh names br. m. Bessie.....3 3 dis.
Time—2:27, 2:29, 2:30.

No. 8—Running; mile heats, free for all three year olds; \$100 entrance; \$50 forfeit; \$350 added; second horse saves entrance money.

Henry Schwartz names s. c. Mark L.....1 1
L. R. Martin names E. J. Baldwin's b. f. Glenclg.....2 2
Richard O'Neil names bl. c. Raven.....3 3
J. C. McDonald names g. f. Lexington Belle.....3 dis.
Time—1:43, 1:42.

No. 9—Running; mile and repeat—made-up race. Purse \$800, in five parts.

L. R. Martin names b. f. Blossom.....1 1
J. B. McDonald names ch. f. Cordelia Planet.....3 2
Wilbur Pierce names ch. h. Cosmo.....2 3
A. Miller names bl. m. Black Willows.....4 4
R. K. Allen names b. f. Maid of the Mist.....dis.
Time—1:44, 1:46.

No. 10—Trotting, 2:30 class; purse, \$1,500; first horse, \$900; second horse, \$450; third horse, \$150.

John Williams names Wm. Graves's s. g. Graves.....1 1 1
George O. Tiffany names b. s. Gibraltar.....2 2 2
L. H. Titus names br. m. Echora.....3 3 3 3
P. L. Shafter names g. h. Rustic.....4 dis.
L. J. Rose names bl. m. Beautiful Bells.....dis.
Time—2:23, 2:24, 2:24.

No. 11—Trotting; free for all; purse, \$1,500; first horse, \$900; second, \$450; third, \$150.

Chas. Marvin names br. g. Occident.....1 1 1
W. H. Humphries names ch. g. Judge Fullerton.....2 2 2
A. F. Smith names ch. g. Pat Hunt.....3 dis.
Time—2:23, 2:23, 2:22.

No. 12—Running; two mile heats; free for all three year olds; \$200 entrance; \$100 forfeit; \$500 added; second horse saves entrance money.

George Treat names b. c. Lottery.....1 1
L. B. Martin names E. J. Baldwin's b. m. Clara D.....3 2
Richard O'Neil names blk. c. Raven.....2 dis.
Time—3:30, 3:35.

No. 13—Running; free handicap; mile heats; purse, \$400; \$50 entrance; \$25 (if declared) added.

W. L. Pritchard names ch. m. Lena Dunbar, 108 lbs.....1 1
F. Dupouire names ch. h. Modoc Chief, 100 lbs.....2 2
L. J. Martin names br. f. Santa Anita, 92 lbs.....3 3
D. Deimison names b. h. Ecliptic, 100 lbs.....4 4

Napa and Solano District Fair.

As we have stated, the fair of the Napa and Solano district, held at Vallejo, was a success, and did credit to those who put forth efforts to accomplish it. The following is the official list of premiums awarded:

Horses.

Thoroughbred stallion, 4 yrs old, Lodi, by Wm. H. Coombs, \$20; stallion, 2 yrs, Pasceval, by W. H. Coombs, \$10; stallion, 1 yr old, by Bayswater, by W. H. Coombs, \$5; thoroughbred filly, 1 yr old, filly by Bayswater, by W. H. Coombs, \$5; mare, 4 yrs old, Ruth Ryan, by W. H. Coombs, \$15; sucking colt, dam Ruth Ryan, by W. H. Coombs, \$5; filly, 2 yrs old, bay mare by Lodi, by W. H. Coombs, \$5; mare and 4 colts, all thoroughbred, Eva Bulwer and colts, by W. H. Coombs, \$20; stallion with 6 of his colts, Lodi and colts, by W. H. Coombs, \$25; mare and three colts, other than thoroughbred, Black Maggie and family, by A. L. Chapman, \$15; stallion and 6 colts, Gladiator and family, by John Wilson, \$30; spec prem to S. S. Drake for Admiral and family.

Draught Horses—Stallion, 1 yr old, Young Pedro, by Joseph Blake, \$6; colt Norman, by Dom Pedro, by Joseph Blake; Nancy and colt, Joseph Wilson; stallion Black Prince, by John Wilson; Prince George, 3 yrs old, by Black Prince, by John Wilson; stallion, 1 yr old, Success, by Lightner, \$5; mare, 4 yrs old, Black Maggie, by A. L. Chapman, \$10; mare, 2 yrs old, Susie, by Lightner, \$6.

Graded Horses—Stallion, 4 yrs old, Gen. Taylor, Jr., by Geo. Bement, \$15; stallion, 1 yr old, "F. D.", by S. S. Drake, \$5; mare, 4 yrs old, Lady Norfolk, by A. L. Chapman; suckling colt, Tomboy, Casserly colt, by A. L. Chapman, \$3. Spec prem. offered for Casserly colts was awarded to P. Durbin's gray filly.

Horses of All Work—Stallion, 4 yrs old, Young Geo. M. Patchen, by Joel Merchant, \$10; stallion, 3 yrs old, Halley, by C. W. Lightner, \$8; stallion, 2 yrs old, Henry, by C. W. Lightner, \$5.

Carriage and Saddle Horses—Single buggy horse, Rocket, by Signal, C. W. Lightner, \$5; double team, Kate

and Nelly, by Woodward, M. L. Durbin, \$10; horse, Rob Roy, by Ethan Allen, M. L. Durbin, \$4.

Jacks and Mules—Jack, George Washington, entered by B. B. Brown, \$8; jennet, Maggie McDonald, by B. B. Brown, \$5.

Cattle, Sheep, Goats, Swine and Poultry, GRADED STOCK.—Two yrs old, Belle Azim, red beifer, A. Scott, \$5.

SHEEP AND GOATS.—Southdown buck, J. M. Thompson, \$8; Southdown ewes, J. M. Thompson, \$2. Special prem to George Bement for 1 yr old Southdown buck. Cotswold buck, T. A. Scott, \$8. Cotswold ewes, A. Scott, \$8. Spring lambs, Southdowns, George Bement, \$5. Angora goat, \$3; Angora buck, \$3; ewe and kid, M. L. Durbin.

SWINE.—Boar 2 yrs old, Berkshire, Comet, C. B. Demming, \$8. Pen of 6 Berkshires, C. B. Demming, \$5. Sow and 4 pigs of any breed, Charles Hobb, \$5.

PURE BRED POULTRY.—Black Spanish, D. W. Harrier, \$2.50. Brown Leghorns, A. T. Hatch, \$2.50. Game cock, Chas. Hobbs, \$2. Plymouth Rocks, C. B. Demming, \$2.50. Bronze turkeys, C. B. Demming, \$5. English rabbits, P. A. Frieble, \$1. Special prem to E. Fish for best lot bronze turkeys.

Grains, Vegetables, Fruits, Etc.

Mrs. Moore—Grain in sheaf, \$5; 12 ears yellow corn, \$2; beans, \$1; rutabagas, \$1; cabbage, 50c; garden vegetables, \$2.50; collection pears, \$4; collection plums, \$3; single variety plums, \$1; six variety plums, \$3; peanuts, \$1; dried fruit, apples, pears, peaches, apricots, nectarines, cherries, \$1; transfer, \$2; tarts, \$3. S. S. Drake, 2d grain in sheaf, \$2.50; single variety pears, \$2; sack wheat, \$5. J. Blake, 2d best wheat, \$3; best barley, \$3; corn on stock, \$1; honey in comb, \$2. G. Bement, 2d best barley, \$2. R. Brownlee, white corn, \$2; 2d best squashes, \$2. James Delaney, yellow corn shelled, \$2. M. Ferrick, 2d best potatoes, \$3. J. M. Thompson, potatoes, \$5; onions, \$1; squashes, \$3; beans, 50c; mangel wurtzel, \$1; carrots, \$1; hops, \$2; pie plant, \$1; garden vegetables, \$5; watermelons, \$1; muskmelons, \$1; sugar beets, \$1; largest and best collection fruits, \$10; display apples, \$5; six varieties apples, \$3; six varieties pears, \$3; oranges, \$3; varieties wine grapes, \$4; figs variety, \$2; best cider, \$4. Mrs. Drake, dried plums, \$1; preserves and jellies, \$5. J. W. Farmer, sweet potatoes, \$3; blood beets, \$1; cabbage, \$1; watermelons, \$2; muskmelons, \$1. Mrs. Wright, quinces, \$2; Deming Bros., pomegranates, \$2. M. L. Durbin, collection of grapes, \$5; six varieties table grapes, \$4; raisin grapes, \$3. A. T. Hatch, almonds, \$3. A. F. Grigsby, single variety apples, \$2. Special premiums, R. Brownlee, collection pears; Mrs. Moore, collection apples; J. Blake, collection apples; Mrs. Moore, collection peaches; J. M. Thompson for Eastern black walnuts, Eastern horse chestnuts and a new variety of seedling apples.

Domestic.

Mrs. Hutton—Butter, 6 pounds, \$8; packed butter, \$5; pickles and catsup, \$3; Miss Hutton, best cakes, \$5; Mrs. Moore, home made canned fruit and



Fancies—On the San Joaquin.

[Written for the RURAL PRESS by MRS. GEORGIE D. W.]

Where the San Joaquin's clear water
Softly glides with its glittering train,
Winding its way where the breezes loiter,
Through the sifted shade of the tasseled grain.

Glancing and sparkling in the sunlight,
Bearing away through the sultry plains,
Drifting away in the solemn starlight,
Away where the shepherd's flocks are lain.

Here, while contemplation borrows
From the past its minor tone,
Fancy from the book and flowers,
Upward seeks the cycles flown.

Legends wild, o'er Mexico's Joaquin,
Thrill me with their mystic lore;
Border herds, whose haunts were hidden,
In the sedges near the shore;

Where at midnight, from the tules,
Dusky forms sprang from their lair;
By the torchlight, to their allies,
Answering back the signal glare.

But away! my muse draw nearer,
Furl your wings o'er scenes more bright,
Scenes of pleasure, scenes much dearer;
Sing of the present ere its flight.

Hark! in yonder tree the blackbirds
Thickly throng the branches through,
Twittering, chattering mystic words;
Wild woods, craft and mast and crew.

Now, the shepherd's song is ending,
As his browsing flock he tends,
Sweetly in the distance sounding,
Strains which memory fondly blends.

Now the distant landscape's darkening,
Evening shadows linger here;
While the love star low is bending,
And the silvery moon draws near.

Earth and sky in one sweet glory,
Power, beauty, love sublime,
Nature to her trust, most holy,
Consecrates the hour divine.

But adieu: bright Joaquin, gladly
Sing thy songs forevermore;
Join the anthems pure and holy
To the Eternal! God adore.

Now I leave thee whispering softly,
Only this—one leaflet east
On thy bosom, bear it gently
To the "waters that have past."

Inverness, September 18th, 1873.

My Old-fashioned Neighbor.

[Written for the RURAL PRESS by FAITH FREMONT.]

I had just been looking over *Demorest* for July, and smiling to myself at the absurdities of the prevailing mode of dress, when the click of the gate latch announced a visitor, and my friend Mrs. Stebbins' pleasant voice accosted me with a cheery:

"Good morning, Mrs. West."

Seating herself, we talked awhile upon common-place topics, the state of the weather, the health of our families, and so on, when happening to glance at the book on the center table, she took it, and examining the contents closely, laid it aside, and taking her knitting work from the depths of her capacious pocket, began knitting vigorously, at the same time exclaiming—

"My patience, such fashions as they do have nowadays! Such nonsense in everything! I'm minded of a little conversation I had tother day with one of our neighbors. I must tell ye about it, Mrs. West."

"Pray, do," I said; and adjusting her spectacles she began—

"Well, me and Abslom wuz just settin' down to supper last evenin' when Susan Cobb cum runnin' in all out o' breath saying: 'Oh, Miss Stebbins, have ye herd the news? Anna Lucas has just got home from the city, and they do say she is actily engaged to a man with half a million of dollars. Don't it beat all?' 'Why, Susan,' says I, 'I don't know as that's anything out o' the way. If Anna is goin' to hev that chance in life, I'm sure I don't grudge it to her. Poor thiug, she's allus had a hard time of it. What, with losin' her father, and her sick mother, and them three little ones to feed and clothe, her shoulders haint hed no light weight to bear.' 'But jist to think, Miss Stebbins,' sez Susan, 'here's me and Sallie Grubbs, and Dorcas Jones, and Martha Brown, and lots of others, and enny of us better lookin' than her, and our folks better off than Anna's, to think that she, that we all made light of and kind o' slighted, should git above us that fur. But I can't see fur the life of me how she happened to sich luck. Why, I went off to Gushem and staid one whole winter, and, I declare to gracious, I never had a beau while I wuz in the place, and there wuz lots of young men loafin' round, too.' I see Susan wuz mighty put out. I tried to pacify her, tellin' her that her time wud come after awhile, and no tellin' what wuz

in store for her; but I see it didn't do much good, and she left purty soon, and I thought I never see anybody swing their bounet and stalk along in sich a dissatisfied way. I went to washin' up my dishes and Abslom took his pipe and sot down fur a smoke (he allus smokes after eatin'). I see he hed something to say, fur he puffed a long, slow whiff and turned round in his cheer and sot studyin' awhile; purty soon says he: 'Betsy, what's the reason the gals nowadays set sich store by the fellars as has money? It didn't used to be so.' 'Jist because they aint brot up right; that's the reason,' sez I. I don't blame the gals. I lay it all to their parents. They are brot up to nothin' but dressin' and goin' to balls, and spendin' their time in foolish, uscless ways, and they know it takes money to keep up that kind o' life, and they aint taught to work, and they don't know how to git that money to show off on any other way than to try to ketch a rich husband, no matter if he is twice as old as they are; that's all the better, they'll git all his money the sooner. So they must paint their faces, and friez their hair, and flounce and ruffle their dress, and keep their hands white at all hazards in order to look purty to these old fools, fur they know a purty face can turn a gray-headed man's brain as quick as one not so gray. Of course when their hands is so full of that business they aint got no time to help their old mother, not if her back breaks over the wash-tub and her head aches fit to bust from overheats in the kitchen. Only tother day I wuz over to Squire Brown's, and there in the parlor sot Martha (she makes 'em all call her 'Mattie' since she came from boardin' school). There she sot sewin' on the machine, makin' her a dress all flounced and fixed off, till I couldn't see no sense whatever to it; and she had another one to wear atop of that, and it wuz worse than the under one. It wuz all drawed back and puckered up behind, and—but I can't describe it. I declare it wuz in a dreadful shape. Well, she wuz a fussin' round with it and tryin' it on and piunin' it tight across her lap, tryin' to make it set to suit her, and I a watchin' her till I wuz out of all patience; and, says I, 'Martha (I never will call her 'Mattie'), says I, 'Martha, what's the use of all them things onto one dress? To my notion it would hev been purtier if some of them ruffles and tuckers had been left off, and you could have hed enough left to hev made your sister a nice dress, too.'"

"Why, dear me, Mrs. Stebbins," says she, "this is all the style. I could not think of wearing a plain dress without ruffles and a pin-back, and I have not used a bit more than was needed. Pa only brought me 19 yards."

"Good lands!" says I, 19 yards would have clothed a hull family in my young days. And as for them piubacks I must say they are the most disgustin' thing I ever saw, and if I had a girl I wouldn't allow her to rig herself up in no such a outlandish way."

"I see Martha's lip curl, and says she, 'Oh, you hev sich old-fashioned ideas.'"

"Old-fashioned or not," says I, "it's the truth, and I mean jist what I say. You girls think you look more attractive in the eyes of the young men, and I reckon they do like to look at you for they never fail to gaze as long as they can see one of you when you are dressed in what you call 'latest style.' 'I see in a minit Martha was riled, but she didn't condescend to answer me, and so I dropped the subject and asked her where her Ma was. She said she 'persumed she was in the flower-garden,' so I went in search of her; and there in the midst of the bean patch I found Mrs. Brown, sleeves rolled to her elbows, and hoe in hand, cuttin' weeds right and left, and looking warm and tired enough to faint."

"Sakes alive! Mrs. Brown," says I, "why don't you have that great girl of your's at this? she is a good deal abler than you are for sich work."

"Mattie do sich work? Why, Miss Stebbins, she couldn't begin to. If she helps me a little about the housework mornins, she is all out o' breath, and good for nothin' the rest of the day. She was always delikit and more so than ever since she went to boardin' school."

"Of course she is delikit, thought I (but of course I didn't say it) when she can curl and crimp and ruffle all day, and go to a ball in the evenin' and dance every young man in the room out of breath; of course she ain't able to weed the garden."

"Miss Brown laid down her hoe, and we took a seat in the shade of an apple tree to chat awhile."

"Miss Brown," says I, "what do you think of the way girls is bein' raised nowadays?"

"Well," says she, "I can't say as I think we raise our girls jist as they should be, but I don't see how it's to be helped. They are all brot up on about the same plan, I b'leve. Dress and dance and idle away their time, and it seems to be the fashion to bring them up in the firm belief that they are too good to be useful, industrious bein's, and that the less they know about work the more ladylike they are and the sooner they will get married, for marryin' is their highest ambition."

"Poor, weak human natur!" says I, "if we would only have the courage to break away from the hateful customs of the day, and do our duty to God, ourselves, and our children by teachin' them that there is more to live for than mere worldly pleasures and vanities, and that honest labor is a glory instead of a disgrace to them."

"Why, Miss Stebbins," says she, "I feel the evil of these things as much as you, and I've worried and wept over the way my children

wuz growin' up into the world, but you know a mother's influence don't allus have the weight it should, and unless the father is heart and soul with her in these things her efforts is worse than wasted. Now, Moscs is a good man in the main, but him and me don't allus agree on things, and in the trainin' of children we can't see alike at all. When I talk to him of the folly of lettin' them go on so, he says: 'O Nancy, do let the children enjoy themselves while they're young. I ain't goin' to hev our girls behind everybody else in the neighborhood, and they hev to go to balls and see everything that's goin' on or be laughed at, for lots of folks think unless a girl can waltz, and sing, and play the pianner, and paint pictures and sich like, that she is a regular 'greeny,' and no young feller wants a wife that people make fun of.' So that generally settles it, for the girls of course think if I a sides in with them, why, they can't be doin' fur wrong, and they keep on jist as they began, and I reckon allus will."

"I didn't stay much longer, for it was gittin' late in the day, and as I went home I thought to myself, if I had the trainin' of that family I would see if I couldn't make a change without the old man's help; but we can't allus know jist how a shoe fits unless we wear it, but I think I could make a change, even if it took a little judicious usin' of the rod to bring it about. Now, Abslom is a man of few words, but what he does say is generally to the pint, and he means it all, and his 'Betsy, your head's level there,' is as good proof to me that he is with me heart and soul on anything as if he talked an hour over it. But, land sakes! here I've did all the talkin', and you hain't had a chance to slip in a word edgeways. Well, it's most five and I must go; come and see me when you can. Good afternoon, Mrs. West," and she hurried off humming "Old Hundred," and as I prepared the evening meal I thought over the eccentric manuers and plain common-sense ideas of my old-fashioned neighbor.

Children's Rights.

EDITORS PRESS:—Among your many correspondents, there are some whose communications afford me special pleasure. Mr. Ashburner's, so full of reliable information; "Mary Mountain's" abounding with good sense, even including the "Matrimonial University," which I herchy endorse; "G. K. M." with his scanty, but obviously truthful accounts of Los Angeles affairs, and my old friend Mrs. Nicholls, whose opposition I am happy to have called forth. I plead "Guilty" a second time in the columns of the RURAL.

You are quite right, my dear Madam, in accusing me of confounding legal rights (wrongs rather) with natural rights. Your forcible examples of the disparity of the legal and natural rights of children, made

"My eyes cloud up for rain; my mouth to take to twitching round the corners.
I pity mothers too!"

I had no idea that such laws disgraced the Statute book. There's my confession! After confession should come atonement. At-one-ment! Literally, I presume, framing the subsequent conduct in accord with those views to which we were enemies, but which we now are at one!

But I approach the laws and constitutions with a large measure of respect. One has to realize that primarily, laws are "not made for the good man (or good woman), but for the lawless and disobedient, etc." I realize that edged tools sometimes cut where it was never intended they should. I cannot believe that a set of men could be found to make laws whose ordinary operations should involve such abominations as those instanced by Mrs. Nicholls. Surely we should not allow any opportunity to pass by of amending such anomalies. It makes one's flesh creep to think what might befall one's own dear little ones. The fate of the "Babes in the Wood," may almost be legalized next.

A nervous person even can live happily over a powder magazine as long as he is ignorant of its existence. Now, I had no idea of this legal infernal machine, ready to shatter my family ties the moment my spirit should return to God who gave it. And, although I'm shy of handling such perilous stuff, I'm ready and willing to take any share in pitching it overboard, even though some one gets hurt before it's finally rendered harmless.

Won't Mrs. N., or some other lady having the necessary knowledge and ability, present the readers of the RURAL PRESS with a catalogue of these noxious laws requiring amendment, so that the Constitutional Convention may do some real useful work in correcting such outrages? I think I could find fully a hundred who would gladly petition the Convention to take immediate action on the subject. What lady or what lawyer will champion the cause of the little ones?

Now! "Bis dat, qui cito dat."

EDW. BERWICK.

Monterey, Cal.

As soon as a felon is felt put a fly blister over it, and in six hours it can be picked out with a needle.—*Ec.* Yes; but suppose you feel the felon feeling in your pocket for your purse and havn't any fly blister, couldn't you pick it out with a jack-knife at once?

Home Live Stock.—No. 3.

Written for the RURAL PRESS by MRS. RANCHER.

How to make Children Obey.

In the first place do not forbid a child any pleasure unless there is good reason for doing so. If your child is a veritable busy body, into sixty things in as many minutes, do not fret. Think how you would feel if he wished to sit quiet and dumpish in the corner.

Provide him with amusement. Let him (or her) make mud pies, even if he does get dirty. Let him blow soap bubbles. Teach him to build block houses, etc.

As for rules, make them for yourself; if you will keep them, he will. If you never promise reward or punishment without keeping that promise; if you never deceive a child; if you never allow a command to go by unheeded, you will surely have an obedient child. If you say: "Charlie, bring mamma the towel," and Charlie does not wish to do so, do not get it yourself, though it take much time and trouble to exact obedience.

If you say, "Charlie, do not climb up there," say it but once. If he persists, give him some light punishment, like tying him in a chair for five minutes. If he repeats the offence, repeat your punishment. He will scarcely try more than five times, and soon the lesson will be learned that when mamma speaks she means it.

As your children grow up—indeed, while they are very young—teach them to work. There are two extremes. One deprives children of all play; yes, of all means of gaining an education; that they may draw water, herd stock, care for the fowl, etc. The other gives the children every possible chance for learning and pleasure; exacts no labor from the "poor things;" makes drudges of the parents till the children care for them only as they minister to their wants. I do not know which is the worst.

Even while your children are young make companions of them. Keep your heart young, and never lose their confidence by treating it with disdain. If you wish them to be polite to you, be polite to them.

Farmers have one great advantage in training children; inasmuch, as, if they but set a good example, and have a care to employ men of good character (and they can), the children's minds will be set in good before they are exposed to other influence. There is no street influence to counteract.

And now, my friends, do you say you can not take so much trouble? Beware, lest as years roll on trouble takes you.

And judge you, which is the greater trouble, present thought and care to guard against wrong, or the future trouble of having your sons idle, vicious, dissipated; your daughters disobedient, disrespectful, and it may be wanton.

ACUTE SENSES OF WOMEN.—The marked superiority of women over men is in few points more remarkable than in their powers of smelling and tasting. A woman will detect the faintest odor of tobacco when a man, even though a non-smoker, often fails to discover any symptoms of it. As with smell, so with taste, in which women are marvelously acute and fastidious. This faculty has been graciously recognized at the Paris Exposition. The mustard congress consists of 12 gentlemen and an equal number of ladies. This arrangement, it is stated, is owing to a suggestion that the palates of men are vitiated by smoking, whereas women, who do not as a rule indulge in that pernicious habit, are likely to be better qualified to form a correct opinion on the merits of condiments.—*Am. Cultivator.*

A CAUTION TO YOUNG FOLKS.—That reading in bed by the light of a candle is a bad habit was fully demonstrated by Thos. Moore, Monday night. While engaged in perusing some choice volume (undoubtedly a work on metaphysics) he fell asleep, and the candle burnt down to the table; and if the fire had not been discovered by Mr. Engels and extinguished, with the assistance of Mr. Martinez, we would have had to chronicle a house burnt down, and a boy burnt to death. As it was, a number of books, papers and a large portion of the table, were consumed. Boys, don't read in bed.—*Guadalupe Telegraph.*

THE POPULATION OF THE WORLD.—The latest edition of Behm and Wagner's *Bevolkerung der Erde* gives the present population of the earth at 1,439,000,000 as compared with 1,424,000,000 as given in the previous issue. These figures are based upon the most recent censuses taken in various countries. The population is divided as follows: Europe, 312,398,480; Asia, 831,000,000; Africa, 205,219,500; Australia and Polynesia, 4,411,300; America, 86,116,000.

WE noticed some wheat on our way to Colusa so short that it will have to be lathered before it can be cut. A long-tailed, badly soiled duster was in town Wednesday, trying to sell maps of botany. But nobody botany. Owing to the scarcity of dollars many Wheatlandites have not been able to change their quarters this summer.—*Wheatland Recorder.*

TRAMPS.—Tramps who feel inclined to rove as far as Central America would do well to avoid Costa Rica. The magistrates in that quarter are authorized to turn over all vagrants under 50 years of age to the commandants of departments who place them at the disposal of the State railroad superintendent, to be employed in the construction of the Costa Rica railroad.

Chaff.

A WOMAN can do almost anything in a graceful manner, except gnaw green corn off the cob. "See here, mister," said a boy who was driven up a tree by a ferocious dog, "if you don't take your dog away I'll eat up all your apples."

The flying machine cannot successfully wrestle with currents; and the same may be said of the small boy, if the currents happen to be green.

If a man's position as a subordinate were as big as he tries to make his wife believe it is, he would own the whole concern where he works.

GENTLEMAN (log.): "I say, waiter, I've just cracked this egg; look at it." Waiter: "Don't look very nice at that end, sir, I must say; try the other."

THE *Denver Tribune* informs us that Joe Jefferson will buy a farm on the Platte and erect a summer residence thereon. He'll not stay twenty years there.

THE most remarkable exhibition of our age on record is that of an Oriskany dog 38 years old.—*New York Star*. What has an Oriskany dog to do with your age?

EDISON is engaged on a muzzle which will convey the bark of the nocturnal dog beyond the city limits; but there are apprehensions that Bergh will interfere.

AN English boy was beating a donkey unmercifully, when the minister of the parish coming up, censured him for his cruelty. The boy resentfully retorted: "I'm sure ye needna care; it's a name of your congregation."

THE fact that George Washington's wife never asked him where he had been when he came home late at night, goes a great ways toward accounting for his extreme truthfulness.

A MAN named King, of Massachusetts, has lately coughed up a splinter of wood that penetrated his face twenty-nine years ago. But might it not be some other splinter or some other man?

AN ingenious Irish belle has surprised London by appearing in a costume composed of thirty-nine of the blue and white silk handkerchiefs so fashionable at present. A light amount of clothing.

A COUNTRY newspaper says that a young cornetist who took a first prize last week "is an artist of the first water." Why not say an artist of the first wind? Very few cornets run by water.

A LITTLE girl was giving testimony before the court, when the opposing lawyer put on a fierce look and demanded if she knew where liars went. "To the Potter committee, I guess; that's what papa says," replied the sweet lump of innocence.

"DID you ever dabble in stocks?" asked a lawyer of a witness who was known to have fled from his native land to this asylum of the free. "Well, yes; I got my foot in 'em once, in the old country," was the reply.

HOWLING WOLF and seventy Cheyenne Indians have cut off their scalp-locks as evidence that they desire to become civilized; but it will not be well to trust them until they further evidence their good faith by robbing a bank or stealing a few sheep.

A JERSEY widower, who had taken another partner, was serenaded on his wedding night. The parties bought a phonograph, in which were preserved some of the oburgations of his first wife, and when they set it going under his window, the happy bridegroom broke out in a cold sweat and crawled up the chimney on a bridal tour.

THE good woman who tied a bunch of variegated ribbon to the caudle of her poodle, remarked that it was the duty of every one to do something toward making the world brighter and better. She might not be able to point a moral as well as the minister, but she could discount him at adorning a tail.

SOJOURNER Truth, the colored woman who is believed to have passed the one hundredth anniversary of her birth, and whose death has been more than once reported, is still alive and active. Does it take a hundred years residence to constitute a sojourner East.

"WHAT are you about?" angrily exclaimed a country editor the other day to his wife, who was touching up her complexion before the mirror. "Only getting up my 'patent outside,' dear," was the reply. The editor coughed, and went out to trade a couple of copies for a soda cocktail.

MR. RODGERS, the sculptor, now in Rome, has completed his crowning figure, "The Genius of Connecticut," and it will soon be shipped. It represents a bronze Yankee whittling out wooden nutmegs.—*Ez.* Yaas, and Albert Mead will soon forward its companion—a Western man trying to eat those wooden nutmegs.

A GENIUS in Durham, N. H., thinks he can demonstrate that the area of five circles is equal to the area of four squares of the same diameter, and consequently that the area of a circle is equal to four-fifths of the square of its diameter. Will he get the \$100,000 which the Bank of England deposited as a prize years ago? Or is this merely a Durham bull?

PHENIX boasts of many splendid looking clerks, but this little story relates to only one. On last Monday a young lady stepped into a store where a young man, who had long been enamored but dared not speak, stood behind the counter. In order to remain as long as possible she cheapened everything, and at last said: "I believe you think I am cheating you." "Oh, no," said the young man, "to me you are always fair." "Well," whispered the lady, blushing as she laid an emphasis on the last, "I would not stay so long bargaining if you were not so dear." Tableau.



Young Folks' Column.

Wilyum's Watermillion.

You, Wilyum, come 'ere, sir, kernegiate! What dat you got under dat box? I wants no circumfrin' now! What you say, sir? Aint nuffin but rocks? Seems to me you is moughty particalar—perhaps dey is of a new breed—

I'll jist take a look. Hi! ef dat ain't de cur'ousest rock I ever seed!

I calls dat a plain watermillion, you seamp! and I know whar it growed—

It coined f'om de Jimmerson corn field, jis on tudder side o' de road.

You stole it, you raskil! you stole it! I watched you f'om down in de lot, An' time I gits th'ough wid you, nigger, you won't eben be a grease spot!

I'll fix you! Abe Lincoln! Abe Lincoln! Go cut me a hick'ry! Be quick!

An' cut me de toughest, too, sir, you can find dis side ob de erick!

I'll larn you, you Wilyum like Pettus, to steal an' lie, you young sinner, Disgracin' yo' ole Christian nammie, and makin' her leave cookin' dinner!

Now ain't you ashamed o' yo'self, sir? I am! I ashamed yo's my son!

An' de good old Racorderer Angel, he's ashamed, sir, o' what you has done!

An' he's wroted it down up yonder, in burnin' and great big letters,

"One watermillion, stolen by Wilyum Isaac Pettus,"

An' what do you s'pose Brudder Baseom, yo' teacher at Sunday school,

Would say, ef he knowed how awful you's gressioned de Golden Rule?

Boy! whar is de raisin' I gied you? Is you boun' fur to be a black villian?

I'm s'prised dat a chile o' yo' nammie would steal any man's watermillion!

An' I'm gwine now to cut it right open, an' you, sir, shan't have narry bit!

Fur a boy who will steal watermillions—an' right in de open day light—

Ain't—laudy! its green! Abe Lincoln! Abe L-i-n-c-o-l-n? make 'ase wi' dat switch!

Well!—stealin' a g-r-e-e-n w-a-t-e-r-m-i-l-l-i-o-n! Who eber heerd tell o' jist sich?

Can't tell when dey's ripe! Why, thump um—and when dey go punk dey is green;

But when dey go punk, now you mind me dey is ripe—an' dat's jis what I mean!

An' nex' time you look watermillions, you heern me, you ign'ant young lunk?

Ef you don't want a hickin' all over, be sure dat dey'll all go "punk"

Some Spunky Birds.

Our's cat's name is Tige. It is short for Tigridia. He is spotted and marked like an elegant Tigridia blossom.

We used to call him Nimrod, he was such a "mighty hunter." The neighbors used to borrow him when their ratification meetings grew so noisy as to need a moderator. Sometimes Maria would come over from Mrs. Em's, and ring the bell and say, "Is Tige at home? There's mice."

And Mrs. Aitch would say, "Can Tige spend the night with us? We've rats."

And the next day they would say, "Much obliged—he's cleaned them all out."

But Tige is a changed and humbled cat; he is a conquered cat, and conquered by—a pair of old robins.

They began a nest in the apple tree in our back yard; Tige smiled, for in his way, he is very fond of birds—especially at his breakfast time. He let them get their nest well under way and then he went for them. He crept up the tree, lay across the nest, and waited.

The robins came, and our hitherto invincible Tige found his Waterloo.

They pecked his eyes, they pecked his nose, they pecked the top of his elegant head. Out of the tree he scrambled and fell, and they swooped down upon him with their claws, they pulled out great bunches of the handsome fur out of his handsome back. He ran for the house, and they followed him to the very threshold. Then they filled the air with their angry opinions. They scolded, defied and threatened—and Tige gave in.

Now those robins hop close to our back door, and look saucily into our back windows. They are feeding their fledglings now. Tige sees the dainty morsels of their long tender necks, and walks away. He has given up the back-yard to them, while he goes in and out the front way, and lies in the parlor, on his damask cushion, a Conquered Cat.—*Wide Awake*.

A LITTLE girl wanted more buttered toast, but was told that she'd had enough, and that more would make her ill. "Well," said she, "give me anuzzer piece and send for the doctor."

A SMALL boy and a gun are harmless things apart, but they make a terrific combination; but yet no worse than the revolver and the man who didn't know it was loaded.

GOOD HEALTH.

The Shape of the Shoe.

EDITORS PRESS: Is there in San Francisco, or in the civilized world, a shoemaker who can and will make a proper covering for a human foot?

The shape of our boots and shoes are a foul blot upon our boasted enlightenment. Why, a shoemaker's last bears about as much resemblance to a natural foot as it does to a man's nose!

Corus and bunions, and overlapping toes, which ought to be absolutely unknown, are the rule among the great mass of white people, and of all the thousands of feet to be seen in the streets of a city, scarcely one pair in a thousand are of the natural form, and that pair is the property of some barefooted hoodlum!

Have we not borne the tyranny of the shoemaker long enough? Or is it the fault of fashion alone? In any case, let some one in the land of freedom come forward with moral courage enough to make shoes of the absolute shape of his customers' feet, which for the very young, at least, would be a natural shape. Let the foot be clasped as tightly as comfort will allow behind the toes, but let the toes spread as God intended them to do. Above all, abolish the absurd practice of chamfering off the sole from the ball of the great toe, so as to compel that important part of the locomotive apparatus to take an unnatural position with reference to the axis of the foot, to the destruction of all grace and power in running or walking. The law of Nature is that a straight line drawn from the point of the great toe, through the centre of the ball thereof, shall, if continued backward, pass exactly through the middle of the heel. Now, I will venture to say that there is not a pair of boots or shoes to be found in San Francisco that will conform to this law, for if a straight edge be laid upon the sole, at the distance of half the breadth of the great toe from the edge, and parallel to that edge, it will invariably be found to pass, not as it should through the middle of the heel, but an inch or two inside of it.

This is the land of innovation and experiment. Will not some intelligent and spirited shoemaker try the experiment of making foot-coverings to fit the feet, inwardly at least, and if fashion must be bowed to, let the outside be adapted to its absurd requirements.

C. H. A.

San Francisco, September, 1878.

BETTER CARE OF LIFE ON RAILROADS.—The *Railway Age* remarks that the vast improvement that has been made in a few years in respect to safety appliances upon railways is indicated every now and then by the comparatively harmless results of collisions and derailments, which formerly would inevitably have been accompanied by terrible loss of life. Now it is not very unfrequent for trains to run into each other at full speed without the death or even serious injury of a single person resulting. Such an accident in Wisconsin a couple of weeks ago, and one near St. Louis recorded in this issue, illustrate the statement. The increased safety of travel is due mainly to the adoption of steam-worked brakes, with which the engineer can instantly arrest the motion, and of continuous platforms which prevent telescoping, the accompaniment of collision which formerly was the most disastrous.

DOMESTIC ECONOMY.

The Art of Cooking.

We take from the *Housekeeper* the following excellent hints on the art of cooking: The science and art of cooking may be divided into a few principal parts; the rest is all fancy. These parts are baking, broiling, frying, roasting, seasoning, simmering and stewing. Tasting is an adjunct to all.

BAKING.—In baking, see that the furnace or oven is properly heated; that dishes require more heat than others. Look at the object in process of baking from time to time, and especially at the beginning; turn it round, if necessary, in case it be heated more on one side than the other, to prevent burning. In baking meat and fish, besides keeping the bottom of the pan covered with broth or water, place a piece of buttered paper over the object in the pan. It not only prevents it from burning, but acts as a self-basting operation, and keeps the top moist and juicy. If the top of a cake bakes faster than the rest, place a piece of paper over it.

BOILING.—This is the most abused branch in cooking. We know that many well-meaning housewives, and even professional cooks, boil things that ought to be prepared otherwise, with a view to economy; but a great many do it through laziness. Boiling requires as much care as any other branch, but they do not think so, and therefore indulge in it. Another abuse is to boil fast instead of slowly. Set a small ocean of water on a brisk fire and boil something

in it as fast as you can; you make much steam, but do not cook faster, the degree of heat being the same as if you were boiling slowly. If the object you boil, and especially boil fast, contains any flavor, you evaporate it, and cannot bring it back. Many things are spoiled or partly destroyed by boiling, such as meats, coffee, etc. Water that has been boiled is inferior for cooking purposes, its gases and alkali being evaporated.

BROILING.—Whatever you broil, grease the bars of the gridiron first. Broiling and roasting are the same thing; the object in process of cooking by either must be exposed to the heat on one side and the other side to the air. Bear in mind that no one can broil or roast in an oven, whatever be its construction, its process of heating, or its kind of heat. An object cooked in an oven is baked. It is better to broil before than over the fire. In broiling before the fire all the juice can be saved. In broiling by gas there is a great advantage. The meat is placed under the heat, and as the heat draws the juice of the meat, the consequence is that the juice being attracted upward is retained in the meat. A gas broiler is a square flat drum, perforated on one side and placed over a frame. Broiling on live coals or on cinders without a gridiron is certainly not better than with one, as believed by many; on the contrary, besides not being very clean, it burns or chars part of the meat. That belief comes from the fact that when they partook of meat prepared that way, it was with a sauce that generally accompanies hunters, fishermen, etc., hunger, the most savory of all savory sauces.

The Use of Milk.

Dr. Crosby, of the Bellevue Hospital, pronounces milk an article of diet which all persons may use, under nearly all conditions. There are those who say that they cannot take milk, that it makes them bilious, etc., but he declares that this is not true. A person who is sick may take milk with the greatest possible advantage, because it contains, in a form easy of assimilation, all the elements essential for maintaining nutrition. It is the natural aliment of the young animal, and certainly answers a good purpose for the old animal, provided it is used properly, and not poured into a stomach already over-filled, as though it had in itself no substance or richness. New milk, he does not hesitate to say, may be taken, as far as disease is concerned, in nearly every condition.

Perhaps it will require the addition of a spoonful or two of lime water. The addition of a little salt will often prevent the after feeling of fullness and "wind on the stomach," which some complain of. If marked acidity of the stomach is present, then perhaps a little gentian may be requisite to stimulate the stomach somewhat, and it may be necessary to give it in small quantities and repeat it often; but ice-cold milk can be put into a very irritable stomach, if given in small quantities and at short intervals, with the happiest effect. It is used in case of fever, which formerly it was thought to "feed," and when scalded it has a desirable effect in summer complaints.

But it is an article of diet for people in health, and who wish to remain in that happy condition, that milk should be most appreciated. For the mid-day lunch of those whose hearty meal comes at night, or for the supper of those who dine at noon, nothing is so good. The great variety and excellent quality of prepared cereals give a wide choice of food to use with milk. Bread, with berries in their season, or baked sweet apples, boiled rice, cracked wheat, oatmeal, hulled corn or hominy, taken with a generous bowl of pure cold milk, makes the best possible light meal in warm weather for children, and for all adults who have not some positive physical idiosyncrasy that prevent them from digesting it. The men of the firmest health and longest life are the men of regular and simple habits, and milk is a standard article in such a diet.

CHICKEN CROQUETTES.—Clara Francis writes for the *Prairie Farmer* as follows: Pick the meat from chicken bones, either boiled or baked, and cut it into bits. Boil the bones with a few scraps of beef to make a broth, or use any broth made of beef, chicken or veal. Put a third of a cup of butter in a saucepan; when hot, add a slice of minced onion and fry until a light brown. Throw in a little chopped parsley and a scant tea-cup of flour; stir and mash until it becomes smooth and slightly browned, then add by degrees a pint of broth and half a cupful of sweet cream or milk. Season to taste with pepper and salt and stir to a smooth paste; add two cupfuls of chicken, and turn the mixture into a dish to cool. When perfectly cold, mold into shape in the following manner: Put a teaspoonful of the mixture into beaten egg, and see that every portion is coated with it. Transfer the croquette to a plate of finely rolled cracker and with a fork roll it lightly back and forth until it becomes a well coated, oblong roll, then place on a platter to stand an hour or longer before frying. The croquettes should be as soft as can be possibly handled; the egg and cracker will harden around them, when they can be readily transferred to a frying basket and must be plunged into boiling lard and fried to a delicate brown. Serve hot, garnished with curled parsley. Cold lamb, veal, or even beef may be used in a similar manner.



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SAN FRANCISCO:

Saturday, September 28, 1878.

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NEW ADVERTISEMENTS.

The Boss Pruner, George Larkin, Newcastle, Placer Co., Cal.; Pacific Water Cure, Sacramento, M. F. Clayton, M. D., Proprietor; Woodward's Clothes Clamp for Bedsteads, F. Woodward, Sacramento, Cal.; Co-operative Nursery and Fruit Co. of Los Angeles County, Thos. A. Garey, Pres't, Los Angeles, Cal.; Oranges and Lemons, B. C. Hayward, Orange P. O., Los Angeles Co., Cal.; West Jersey Nurseries, Woodbury, N. J., Gibson & Bennett, Prop's; Thoroughbred Jersey Bulls, F. J. Barretto, Downey City, Los Angeles Co., Cal.; Studebaker Wsgons, E. E. Ames, Sacramento; Improvement in Filters and Coolers, Thos. C. Walters, S. F.; Thomas' Improved Apple Parer, J. R. Crandall, Auburn, Cal.; Strawberry Plants For Sale, J. W. Briggs, San Jose, Cal.; Wanted—500 Tons of Raisin Grapes and Figs, Geo. A. Deitz, Sacramento; Orleans Hotel, Sacramento, Richardson & Presbury, Prop's.

The Week

Already the plows are speeding for next season's crops. The advantage of early work has been clearly shown in many parts of the State by the last few years' experience, and the probability is that the first rains will sink deep into many upturned fields. Various indications present themselves to show that last year's abundant moisture has not been exhausted by the crops just taken off, but that the soil retains a good part to meet this year's downfall. This is shown in the San Joaquin and elsewhere by the green growths which are rising above the stubble, and in the condition of the soil turned up by the plows. Where this is the case, no better measure can be adopted to retain this lower moisture than to plow the surface and thus break the capillaries by interposing a loose stratum between the subsoil and the heated surface. Where this is done a very moderate rainfall will suffice to insure next season's harvest.

The pestiferous, barn-burning tramp is abroad in the land. Three fires were reported on Monday in Sacramento county. A fine warehouse, well filled with grain, at Warm Springs, Alameda county, was destroyed on Tuesday night. It behooves all our friends who have property exposed, to watch it well with the aid of suitable apparatus. The sights between the barrels of a shot-gun are very good instruments for observations of this kind.

OREGON is to ship fresh beef to San Francisco.

The Dessication of Large Estates.

There seems at present to be no difficulty in the way of securing a slice of California land by those who desire and can show a moderate amount of money and a worthiness to be trusted. In fact, the large holdings of agricultural lands seems to a certain extent to be falling to pieces by their own weight. This is as might be expected. There are no laws guarding the integrity of large estates such as hampering the progress of Great Britain. In fact, the immoderate aggregation of land is not at all in sympathy with the genius of this country. There is no tenantry bred into subservience to the landlords will; there are no special rights and privileges going with the possession of a large holding. A man who has an inordinate amount of land carries a heavy burden. A few years ago, when the population of the State was growing at the rate of 2,000 per week or more, there was a disposition to hold tight to the acres, because, in the face of such a prospective demand as the incoming thousands promised, it was thought the acres might double in value each year. Now as this large and unhealthy immigration has fallen off, many land holders find their possessions a weariness, and there is quite a disposition to cut up the tracts according to the desires of purchasers and to make concessions for the sake of gaining the attention of home makers. This is a far more promising condition of affairs than that which preceded it. We are now beginning to work on an enduring basis, and each new home established under the sober conditions which now prevail, is a stone in the foundation of a new prosperity for our State. The many tracts of land which are now coming forward for small purchasers show plainly the way the tide is running, and its direction is a theme for general congratulation.

It is a great mistake to claim that the holding of fertile lands in large idle masses is an advantage to the State or to any class of citizens. The claim that reducing production by locking up arable land, redounds to producers' benefit is short-sighted and incorrect. It may be shown to be thus theoretically, but we prefer to establish the point by experience rather than by theory. No better illustration of the effect of cutting up large estates upon the general prosperity of a country and upon the prices of commodities produced than in the experience of France during the last 50 years. About 50 years ago, it will be remembered, the present system of French land laws went into effect. Before that time there was a system of ancestral estates something like that which exists in England at the present time. When the new laws for the division of estates was proposed, there were determined opponents to the system, and one of the prominent writers of the time declared that the division of the land and the overthrow of the tenantry system would make France "the greatest pauper warren in Europe." No one who knows the prosperity which is now the general characteristic of the French people and the marvelous recuperative power which they have shown under severe reverses, need be told that the threatened "pauper warren" was never realized.

To show how mistaken was the anticipation of evil and how multiplying the productions and independent producers has worked for the improvement of prices and not otherwise, we cannot do better than quote from leading French writers who know both the workings of the old system and the new. M. Passy, who was a leader under the old regime and a large land owner, states, in a published work, that "in the present state of agricultural knowledge and practice it is the small farms, owned by the farmers, which, after deducting the cost of production, yield from a given area and on equal conditions, the greatest net produce; and that the same system of cultivation, by maintaining a larger rural population, not only thereby adds to the strength of a State, but affords a better market for these commodities, the production and exchange of which stimulate the prosperity of the manufacturing districts." Again, writing in 1852, M. Passy says: "No doubt there is no European country in which, during the last 30 years, industry, favored by the long duration of peace, has not developed itself in various ways; but no country has so much as France extended, perfected or diversified the forms of its productive activity. If all the other countries have seen riches accumulating, France has seen

her wealth accumulating still more. And it is easy to comprehend that such progress could not have been accomplished if agriculture had not lent her aid by a better and more fruitful employment of her resources."

This seems pretty direct evidence that there is no advantage in land monopoly and idle tracts even to agricultural producers themselves. It is well known that the prosperity of the farmer lies at the basis of all true and enduring prosperity, and the industrial progress which France has attained rests upon just this strong foundation. But let us advance another item of French testimony, and it is from the writings of M. de Lavergne, of whom the famous English statesman said: "He is one of the most accomplished, laborious and conscientious writers on agriculture of the present age." M. de Lavergne writes: "The best cultivation in France, on the whole, is that of the peasant proprietors, and the subdivision of soil makes continual progress. Progress in both respects was, indeed, retarded for a succession of years after 1848 by political causes, but it has brilliantly resumed its course of late years. All around Toulouse, whence I write, it is again a profitable operation to buy land in order to resell it in small lots. Near Boziers, where I was a fortnight ago, the market price of land has quadrupled in 10 years. But for the duty on land changing hands and the still heavier burden of the conscription, the prosperity of the rural population of France would be great. It advances in spite of everything, in consequence of the high prices of agricultural produce."

How any one can look at the prosperous and self-supporting communities which have grown up in Los Angeles and other counties by the division of the land among proprietary producers and still claim that the influence of idle tracts is a good one for any class of our population, we cannot understand. It is plain enough to us that whatever signs of over-production there may be in our agriculture are attributable rather to our lack of population than otherwise, and that the multiplying our individual agricultural producers greatly, would bring in its wake an increase of the consuming classes; this would open the way for an increased diversity in agricultural productions, and our State would enter upon a plane of interchange of commodities and manufactures among resident producers, which is conceded to produce the most direct and widely distributed prosperity. This is the port toward which our helm should be set, and thither are we drifting along, impelled by each new movement for planting homes upon our unproductive areas.

THE PRICE OF ALMONDS.—We gave a note last week on the reported shortness of the almond crop in the Malaga district. We now learn by London exchanges that the prices of new Jordan almonds at that point on Sept. 1st were from \$30 to \$44 per hundred pounds, and new Barbary "soft shell" from \$8.75 to \$9.25 per hundred pounds. Here is a wide difference, and the advantage which he enjoys who produces the better variety clearly appears. Have we the Jordan almond in this State? It is said to be the very best variety in cultivation anywhere. The fruit is large with a very tender shell; the kernel is also large, white crisp and sweet. The tree is a strong grower, spreading in habit and a good bearer. The blossoms of the Jordan are small and of a pale red color. Has any one this variety growing here? We have a good many almonds produced here now when they are compared with the demand there is for them, although the tree is found a very uncertain bearer. We know at least one grower who had his last year's crop still on hand a few weeks ago waiting for a satisfactory price. If we can solve the problems connected with almond growing in this state and then put in varieties like the Jordan which concentrate value in small weight, there seems no reason why they could not be shipped with profit to London if we cannot sell them to advantage nearer home.

VICK'S FLORAL GUIDE.—Vick's Floral Guide for the autumn of 1878 is now being distributed among those who know by past experience how valuable a little handbook it is in the garden. We advise all to send for it to James Vick Rochester, (N. Y.)

THE total losses to creditors of all National Banks during the last 16 years upon \$500,000,000 of capital, and \$800,000,000 of deposits, are estimated not to exceed \$6,500,000.

QUERIES AND REPLIES.

Insects from Los Angeles.

EDITORS PRESS:—I send you by to-day's mail a—what is it? and what is its mission? Enclosed in this box is an "animal" we found on our poplar trees, eating the leaves.—A SUBSCRIBER, Los Angeles.

The postmaster placed his stamp of disapproval so firmly on this package, or else the bag was so heavily sat on by the mail carrier, that nothing came to hand which we could swear by. The "what is it" shows symptoms of having been a weevil, but which one of the grain-destroying family we cannot tell from the remains. The "animal" from the poplar trees was once a greenish caterpillar, if we can judge by the sample of him which was left. We like to receive specimens which interest our readers, and give all the time we can spare to studying them. It will be well, however, to have them in good shape to form any trustworthy idea of them. If those who are kind enough to send us insects will observe the following precautions, we may be able to give them better satisfaction than we can from vestiges. We are not enough of a naturalist to resurrect an animal from a joint of the hind leg as our superiors are. The following suggestions should be observed: If caterpillars, grubs, maggots, or any sort of "worm" are the depredators, they should be sent alive and uninjured, and put up with a quantity of the leaves, fruit, roots or other substance upon which they feed, as it is sometimes necessary for the referee to breed the insect to perfection before he can decide upon the species. Tin or stout wooden boxes should always be used for packages sent through the mail, as paper boxes are almost invariably broken by "Uncle Sam's" stamp, and their occupants either crushed or liberated. It is never necessary to punch holes in the boxes in which living specimens are sent, for the purpose of giving the latter air, as, at most, they require but very little, especially when packed with leaves. Perfect insects, such as beetles, butterflies, moths, locusts, and the like, should be first killed by the fumes of a match, or by a few drops of chloroform or ether, and then packed between layers of cotton or wool to prevent their rattling about, and in this way may be sent to any distance without injury. Packages upon or in which there is no writing, except the address, are carried at a very low rate of postage. A letter describing, as far as possible, the habits of the insects in question, should always accompany the package.

Points on Plums.

EDITORS PRESS:—We have a plum that produces good crops; the fruit is bright red, oval shaped, sweet when well ripened, parts readily from the stone, and the average weight of the fruit is two ounces. I supposed it to be Hungarian prune, but Mr. Rock says that it and *Gros prun d'Agen* are the same, but does not say whether it is free or cling. Mr. Patterson, of San Jose, in an article in the PRESS some time ago, describes the *Gros prun* as a cling. Now, can some one give us an idea what this prune is, and will Mr. Rock inform us if his Hungarian is a cling and the same that Mr. Patterson recommends for shipping East.—K. I. N., Bakersfield, Cal.

EDITORS PRESS:—They have a plum at Porterville, Tulare county, bought for Fellingburg prune. It makes a beautiful tree, is a regular grower, smooth bark. At first glance one might readily mistake it for a sour cherry tree. The fruit is medium size, oval, dark blue, parts from the stone not very readily. It has fruited two seasons and is worthless so far. Is such ever the case with Fellingburg prune, and can improvement be expected?—J. B. R., Bakersfield, Cal.

EDITORS PRESS:—Your letter inclosing queries from Bakersfield is received. The Hungarian prune, your correspondent inquires about, adheres closely to the stone. *Gros prun d'Agen* is name under which a French nurseryman in San Jose received it from France. The oval, bright red plum he mentions must be "red egg" or Victoria. Both plums are excellent.

The Fellingburg prune parts readily from the stone; more than any other sort I know of. It colors from a week to ten days before fully ripe, and it is often picked in a green state, and then partly adheres to the stone and is unfit to eat, being hard and astringent.—JOHN ROCK, San Jose.

ON FILE.—"Notes," H. E. H.; "Pruning Saw," W. H. J.; "Grape Syrup," J. M.; "Applary," B. W. K.; "San Jose," A. C. K.; "Tuolumne Notes," J. T.; "Domestic Notes," L. J. D.; "Talk with Farmer Boys," J. R.

The Megaphone.

Mr. Edison is still at work turning out novelties of invention and discovery. We take from the *Scientific American* an engraving and description of his megaphone. In the foreground may be seen the instrument as it is used, and in the dim distance may be discerned, in the haze, the upright figure of a man, who is holding converse with the man in the foreground.

From the time of the first man until now, men have endeavored to circumvent nature so as to grasp that which the unaided faculties could never attain. We have telescopes for viewing remote objects, microscopes for making visible the minute, telephones for talking over immense distances, and now, at last, we have a megaphone, which is to the ear almost what the telescope is to the eye, or the telephone to the vocal organs.

The speaking trumpet, which, for two centuries at least, has been employed to direct sound so that it may be heard over a long distance, is much used at sea, and is often employed on land to direct vocal sounds so that they may be heard above other sounds. It is tolerably certain that the speaking trumpet is of modern origin, and that it is the invention of Samuel Moreland, 1670.

Kircher, in his *Ars Magna et Umbra*, and in his *Phonurgia*, mentions a kind of gigantic speaking trumpet, described as the horn of Alexander. According to Kircher, this horn enabled Alexander the Great to call his soldiers from a distance of 10 miles.

Prof. Edison, in his researches on sound, has made many curious experiments, one of the most interesting of which is that of conversing through a distance of one and one-half to two miles with no other apparatus than a few paper funnels. These funnels constitute the megaphone, an instrument wonderful both for its simplicity and effectiveness. The engraving represents the instrument as it stands on the balcony of Prof. Edison's laboratory. A mile and a half distant there is another instrument exactly like the one in the foreground.

The two larger funnels are six feet eight inches long, and 27½ inches in diameter at the larger end. These funnels are each provided with a flexible ear tube, the end of which is placed in the ear. The speaking trumpet in the middle does not differ materially from the ordinary ones. It is a little longer and has a larger bell mouth. With this instrument, conversation can be readily carried on through a distance of one and one-half to two miles. We have conversed and heard singing through the distance named, although both the singing and talking were in the ordinary tone of voice. A low whisper, uttered without using the speaking trumpet, is distinctly audible at 1,000 feet.

THE DAIRYMEN'S MEETING.—The place of the meeting of the California Dairymen's Society will be at Young Men's Christian Association hall, on Sutter street, between Kearny and Dupont, the same place at which previous meetings have been held. The time of the opening meeting will be on Thursday evening, October 10th, at 7:30. It is hoped that all interested in the work of the society will be present at the opening meeting and enroll themselves, so that the discussion of interesting topics will begin early. It is expected that the meeting will be opened with appropriate remarks from the President, Hon. John A. Stanly. The Secretary has already received several important papers to present to the meeting, and any dairyman who cannot be present is invited to send suggestions of any matter which he would like to have considered, to the Secretary, Mr. Wickson, at this office.

PEANUT OIL CAKE.—When the growers of those "hump-back, double-jointed California peanuts," which the train boys proclaim, find that they are growing too many for the market, they can turn them into a very good oil which is marketable, and then they can have the cake which comes from the press as a food for cows. One of the German experiment stations reports the results of analyses of peanut cake, and it is found to be excellent for milch cows, largely increasing the yield of milk.

ESTIMATED COST OF PARIS EXHIBITION BUILDINGS, 50,000,000 francs; estimated receipts, 21,500,000. It is expected that the government and municipality will indirectly derive a revenue of about 100,000,000 francs.

A Worthy Project.

When a man feels called upon to aid some charitable work he naturally chooses that method which will accomplish most. For instance when a man buys a ticket to a concert to be 'given for' the benefit of the yellow fever sufferers, he not only sends his money to the South, but in doing so he cultivates his own taste and encourages the art of music. It is this desire to kill as many birds as possible with one stone that has led to the following project:

At the request of the committee appointed to manage the Centennial celebration in San Francisco, a history of the city of San Francisco and incidentally of the State of California was prepared by J. S. Hittell. This book contains six chapters, dividing the history into as many eras, beginning with the times of the aborigines and extending down to the "hard times of 1877;" a seventh chapter devoted to "general-

The State Fair at Sacramento.

EDITORS PRESS:—The general decision of those who attended the quarter Centennial State fair is, that it was a grand success in all departments, and one of higher merit than heretofore attained. Take the classes of stock at the park. The Jerseys, Ayrshires, Durhams, Devons and Holstein together presented a picture admired by thousands who visited the stalls. For the past ten years the stock on exhibition has been good and advancing to a higher degree. We have now the results of years efforts, and remark the close attention each breeder has given to developing and bringing out the various desirable points.

Jerseys.

Among the Jersey exhibition Mr. F. J. Barretto, of Los Angeles, shows 12 head. From the adult bulls to the three months calves, all showed the highest points belonging to that breed. Mr. Barretto has done remarkably well



METHOD OF CONVERSING WITH EDISON'S MEGAPHONE.

ities"; and an appendix. A. L. Bancroft & Co. are to publish this book by subscription, the profits of the subscription sale to be given to the yellow fever sufferers and to the Catholic, Protestant and Hebrew Orphan Asylums of San Francisco, each object to receive the proceeds of subscriptions intended for its benefit. The book will be a large octavo volume of 500 pages, and the subscription price will be \$5.00.

THE SMYRNA FIG.—The South Australians have concluded that they have not yet obtained the Smyrna fig, and are thinking about how to get it. Their representatives at the Paris exposition are to be requested to besiege Turkish visitors in the effort to obtain the true article. So far as we know, we are about in the same boat as our southern friends on the Smyrna fig question. Mr. W. B. West, of Stockton, has been working at this subject for several years, and if his strength favors him enough to carry him thus far on his present European trip, we may know when he returns whether we have it or not.

on this, his first exhibition. Hon. Jas. McM. Shafter, of Marin Co., showed five head of the same breed; having already taken three premiums at the late Oakland fair. P. Stanton, of Sacramento, has a herd of seven; Robert Beck, of Sacramento, showed a herd of 15 head; N. McDonald, of Sacramento, had seven head, which were generally admired; R. Noell, of Nevada Co., showed a two-year-old bull and two cows, imported in 1877 direct from the island of Jersey.

Ayrshires.

Mr. Peter Coutts, of Mayfield, Santa Clara Co., exhibited 23 head, and R. B. Woodward, Oak Knoll, Napa Co., six head.

Durhams.

The following exhibits were made: Jones & Haggin, San Jose, a herd of 15; Chas. Reed, Yolo Co., six head; E. H. Bridgford, Butte Co., 21 head; D. M. Reavis, Butte Co., eight head; Col. Younger, Santa Clara, 38 head; Jesse D. Carr, Monterey, 17 head; Moses Wick, of Butte Co., also had a fine representation of his large herd.

Devon.

R. McEnespy, Butte Co., showed four head—two bulls, one cow and calf. He had also a representation of graded cows, excellent milkers.

Sheep and Goats and Swine.

The exhibition of sheep and goats was fine, far superior to former shows heretofore. The same may be said in the swine department—Mr. Parker, of San Joaquin, Mr. Saxe, McBright and John Rider, all showing fine specimens of the thoroughbred Berkshire and Poland China. The poultry department showed a wide assortment of breeds by different raisers.

Agricultural Implements.

It is well conceded that the American mechanic stands before the world as superior in the various designs and manufacture of agricultural implements and machinery. We claim in this western shore mechanical skill and invention in abundance. A visit to the exhibition hall proves the fact. A deeper seated claim of devotion to agricultural pursuits is filling the minds of the thoughtful, and those who annually attend the fair are paying more attention to the new inventions and devices arranged by deep thinkers for the assistance of all workers. Although still young, the agricultural progress our State has attained already fills a high place in the eyes of the nations. We have the mixed minds of the world in our golden State working in together and a bright era yet awaits us. Our agricultural interest is rising above all other interests in the State.

Flowers and Shrubs

Were fairly arranged in their variegated color and form, and tastefully displayed by F. A. Eblil and Mr. E. H. Williams of this city, and F. A. Miller of San Francisco.

Hops.

Sacramento county was well represented by her hop growers—her reputation in that line never goes backwards. In quality, size, growth, and production she keeps up and stands at the head in market rates. Messrs. D. Fluit, A. Menke, R. J. Merkley and Mr. Loveshall well represented the staple articles in the lower hall.

Woolens.

The Capital Woolen Mills of Sacramento made a fine display of their goods in the upper hall. The manager, Mr. Tryan, states that business is improving and it is only a matter of time when our fabrics will be woven and spun within our own borders without drawing so largely on Eastern mills.

Raisins.

California's reputation for producing raisins and art in placing them in handsome style is gaining rapidly. Eastern markets are beginning to recognize this. Our dried apples, pears, peaches, plums and prunes are also finding market in foreign parts. Fine dried fruit was exhibited by R. B. Blowers, Woodland, Yolo Co.—all being prepared by the "Mefford process" before passing through the drying state. This process retains the beauty, color and natural tints of varied fruit through the fleshy parts when cut. Mr. Blowers also shows a fine selection of fruit plucked from his vineyard. One cluster of flame colored Tokay weighed over eight pounds, and other varieties, in view suitable for table and raisin use, were equally notable.

Mr. Geo. A. Deitz, Sacramento, presented a varied assortment of dried fruit perfect in style. They were: raisins, plums, figs, cherries, blackberries, corn, pears and prunes.

Jas. Rutter, of Florin, Sacramento Co., also showed fine raisins prepared still in another way, giving nature's light and heat with the addition of man's aid in perfecting them.

Fruit

The display of fruit was fine and prepared by many exhibitors throughout the State. The only regret was that there was not a more suitable place prepared to exhibit so fine a collection. The managers will have to provide better accommodations for fruit hereafter. As it was, the eye rested on the first full tropical scene ever exhibited at the State fair. The exhibitors were: D. C. Young, of Sonoma, assisted by Messrs. Woodward and Gay, and Thos. A. Garey, of Los Angeles. There were semi-tropical fruit trees in full, bearing flowers and fruit. Of the many varieties so finely represented on the length of table, were: 46 varieties grapes, 122 apples, 85 pears, 17 plums, 14 peaches, 2 nectarines, 4 quinces, 3 walnuts, English, American and Californian, 2 almonds, soft shell, 2 chestnuts, American and Italian, 1 butternut, Japan, 14 oranges, 5 lemons, 2 limes, 2 bananas, China Dwarf and Florida, showing blossoms and fruit; 4 guavas, with fruit, 1 passion flower edulis, vine of the Passion family with fruit; myrtle leaf orange, medlar, etc. D. C. Hayward, of Los Angeles county, had 10 varieties tropical fruits.

Forage Plants

Were represented by Bermuda and Egyptian corn. Dairymen are studying up the question of feed and it will be only a question of time when forage and natural grasses will be more fully known and understood. Many are using pickled straw for fall and winter use, also alfalfa and the natural feed in the mountain range and the valley beneath. Prickly comfrey is being experimented by some in the southern portion of the State and becoming a favorite. F. J. Barretto states that he will set out some plants next season for his stock and feels an interest in the subject. I hope it will, like all other new points of interest, be taken up, examined, tried and sifted through and through, bringing out all the meat and marrow it contains. Take the Exposition as a whole, there never was so good interesting a fair passed as the one for 1878.

GEO. RICH.

Sacramento, Cal.

Lands for Sale and to Let.

A NEW COLONY.

100 Homes For Sale on More Reasonable Terms than ever before offered in Southern California.

Eighteen thousand acres of land in Monterey County, including the Pleito rancho, belonging to Pinkerton and Jackson, are now offered for sale in farm or homestead tracts to actual settlers. The lands embrace the finest wheat producing section in California.

Fruit, vegetables and all manner of small grain come to rare perfection in this region. For stock, hogs, bees and general farming, these lands are not excelled. Water and timber are abundant, the San Antonio river running for 12 miles immediately through the lands. Good postal facilities are already established, there being an office at the Pleito rancho, and the coast line of stages passing daily through the entire property.

The lands will be sold on the ground, and all parties desiring cheap, yet valuable farms, should not miss this opportunity of securing them. Those who first come will have choice of location.

An elaborate prospectus detailing terms and conditions of sale is now published and will be mailed to all who apply, by mail or otherwise, to the undersigned at the Pleito post-office, the point where for convenience the business in connection with this new colony will be transacted.

This is no stock company. The deeds to lands will come direct from Pinkerton and Jackson, to whom all moneys will directly pass, and each purchaser is only liable for the lands contracted for. There is no joint responsibility.

Send immediately for the prospectus, directing all communications or applications to

W. W. BROUGHTON,

Pleito Post-office, Monterey Co., California.

TO LEASE ON FAVORABLE TERMS,

50,000 Acres of Irrigated Land in Kern County, with abundance of Water Free.

In tracts of 80 acres and upwards, with comfortable House, good Barn, and Well of excellent water.

CROPS ARE SURE.

An average of 30 bushels of wheat per acre, and other products in proportion, have been raised on this land.

INDUSTRIOUS FARMERS

With stock and implements will find every advantage in acquiring a home and a competence.

COLONIES WANTED.

For further particulars inquire of

McAFEE BROTHERS,

202 Sansome Street, San Francisco

Land for Sale in Napa County.

I am offering my lands in Foss Valley, ten miles north of Napa City, for sale, as follows—to wit:

One tract of 800 acres, including my homestead, 220 acres of which is choice valley land, the balance good grazing land, is well watered, has a large supply of wood, is well improved, has a comfortable dwelling of nine rooms, barn, granary, sheds, etc. Also, a good orchard and choice vegetable garden. Price, \$15.00 per acre.

Also, one tract of 1,020 acres, about 100 acres of which is valley, the balance good grazing hills, is well watered and has enough wood on it to pay for it. Price, \$5.00 per acre. Also, one tract of 300 acres, 40 acres tillable, a portion can be irrigated from springs, has a large amount of wood on it and 500 rods of stone fence. Is well suited to running a small dairy, and raising pigs and chickens, by which a good living can be made; price \$2,000. The climate is choice, being shut in from the chilly coast winds, but has just breeze enough to make it pleasant, title perfect. The above lands lay contiguous. I will sell the whole or either one of the above tracts on easy terms—a liberal portion can remain at 10 per cent. per annum. If desired, will sell with the land, 1,500 head of Spanish Merino sheep. Come and see me, as I am determined to sell. Address the undersigned at Napa City. WILLIAM CLARKE.

FOR SALE.

A fruit and grain ranch, containing about 100 acres, situated at the old mining town of Knight's Ferry, Stanislaus county, California. The place is extensively planted with fruit trees, vines and berries, all of the choicest varieties, of vigorous growth and bearing abundantly, everything of this kind being raised here with the least possible care and in the greatest perfection. The facilities for irrigation, when required, are first-class, the ditch of the San Joaquin Water Company traversing the grounds. There are on the premises a commodious dwelling-house; a stone store-house of large dimensions, with cellar underneath; a spring-house, containing distillery apparatus and conveniences for making wine; also, stables and all other needed out-houses. This land is well inclosed and every way highly improved. The products of these orchards and vineyards have for twenty years commanded the highest prices in the San Francisco market, the adjacent mining camps having also taken a portion of them at good prices. There are on the land rich gold placers that could be worked with large profit, as sufficient water for the purpose can be had at low rates. The farm-house is but 8 miles from the railroad station and within an easy day's drive of many prosperous mining camps. Work horses, wagons, harnesses, cows, hay, farming utensils, a quantity of wine and vinegar, and much other valuable personal property goes with the place. As this fine estate must be sold, it is offered, animals, etc., included, at the low price of \$4,000, fifteen hundred of which may, if desired, remain secured on the land at the rate of 10 per cent. annual interest. Title perfect. For further particulars inquire of Claus Gereken on the premises, or of Dr. Henry De Groot, office Mining and Scientific Press, 414 Clay street, San Francisco.

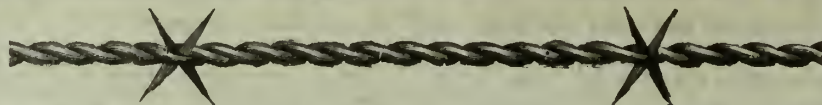
BEE RANCH FOR SALE.

One of the best ranges in the State. At present working 375 stands Italian Bees. Apply for particulars to

D. W. McLEOD,

Riverside

TO OUR PATRONS AND THE PUBLIC.



Having obtained the control of the SCUTT PATENT MACHINERY on the Pacific Coast, we beg leave inform you that we are manufacturing the

Scutt Patent Four-Pointed Steel Barbed Fence Wire,

And we claim its superiority for the following reasons, viz: It is plaited, thereby preserving the grain of the metal. Our machines do not twist the single strand. We use steel made by the Seaman & Martin process for barbs. Our wire is made entirely by machinery, and is perfectly uniform. It is plaited by patent process, and is weather-proof. There are no knife points. It is four-pointed, having 128 points to the rod, double the number of any two-pointed wire. Our wire is wound upon strong spools, and can be shipped any distance.

To those needing fencing, and being obliged to transport it long distances by rail and wagon road, we would especially call attention to the difference in cost between barbed wire and lumber, as well as in cost of material. It takes 300 pounds single strand for one mile, and less than one-half as many posts as board fences. Please address orders to

GRANGERS' UNION, Manufacturers,
280 and 282 Main Street, STOCKTON, Cal.

FARM FOR SALE.

\$4,000.—Two Hundred Acres of Land in Mendocino County.

Thirty miles from the county seat, and 20 miles from the Coast, one of the healthiest localities in the State, especially for consumptives. The place is fenced off in six different fields. Plenty of water and timber for all purposes. A good orchard. Vegetables of all kinds grow well. A good dwelling with six rooms, ceiling and painted inside, good frame barn, granary, storehouse, smokehouse, etc.

Also, Six Hundred acres of grazing land, well fenced, three miles from the above farm, plenty of water and timber for all purposes. Price, \$2,250.

For further particulars, address "B. T.," care of DEWEY & CO., PACIFIC RURAL PRESS office, San Francisco, Cal.

A Good Dairy Ranch For Sale

On Bear River, Humboldt County, Cal., containing 600 acres of good grazing land as any in the State. New Dairy and Dwelling House. The land is well watered, and plenty of timber for firewood and shelter, and well fenced. I will also sell with the ranch 100 head of choice dairy cows and fine horses. Price, \$13,000, one-half down, the remainder on easy terms for one, two or three years. Apply either in person or by letter to RICHARD JOHNSTON, Post-office address, Myrtle Grove, Humboldt County, Cal., or to R. J. JOHNSTON, No. 1,324 Howard Street, San Francisco.

NEW MUSIC! NEW MUSIC!

At Gray's No. 105 Kearny Street,

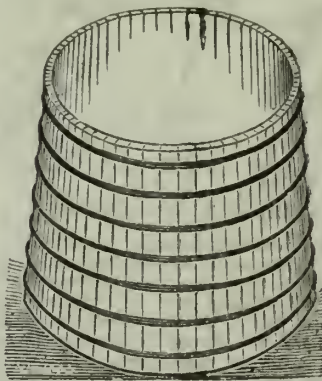
On receipt of the amount in postage stamps, any of the following pieces will be mailed, post-paid:

BABY MINE, (Song).....Smith, 35 cts
BABY MINE, (Schottische).....Stuckenholz, 35 cts.
EMMETT'S LULLABY, (Piano Solo)....Far West, 35 cts.
LITTLE TORMENT, (Schottische).....Far West, 35 cts.
THE SNOW LIES WHITE, (Song).....Harriott, 35 cts.
ALCANTARA, (Galop).....Chauncey, 75 cts.
GOLDEN OPHIR, (Galop).....Yanke, 50 cts

Send for complete Catalogue of Music and Descriptive list of the



State where you saw this advertisement.



WATER TANKS of any capacity made entirely machinery. Materials the best in use; construction excellent. Pan Staves, Tubs and Oak Grates for mining purposes a specialty.

WELLS, RUSSELL & CO.,
Mechanics' Mills, Cor. Mission and Fremont Streets.

ANNUAL MEETING.

The annual meeting of the stockholders of the Grangers' Bank of California for the election of Directors, will be held at the office of the Bank on

Tuesday, the 8th day of October, 1878,
At one o'clock P. M. ALBERT MONTPELLIER,
San Francisco, Sept. 3rd, 1878. Cashier and Manager,
42 California Street.

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Patents

Grangers' Bank of California.

42 California Street,
SAN FRANCISCO CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

OFFICERS:

PRESIDENT.....G. W. COLBY.

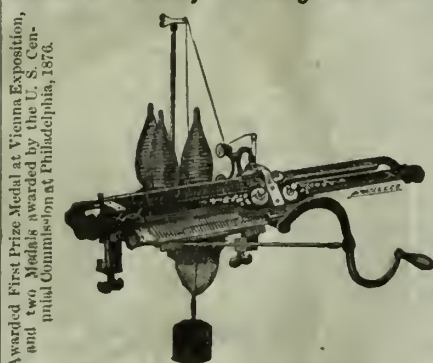
MANAGER AND CASHIER,
ALBERT MONTPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

THE IMPROVED. Lamb's Family Knitting Machine.



IT IS THE ONLY MACHINE That knits flat or tubular work of all sizes; Narrows and widens on hosiery or tubular work; Knits a regular right-angled heel, as by hand; Narrows off the toe; Knits a sock or stocking complete; Knits mittens or gloves of any size without seam; Forms genuine Ribbed or Seamed work; Knits the Double, Flat, or Fancy web; Knits an elastic-seamed stitch Suspender with button-holes; Knits the Afghan stitch, Cardigan Jacket stitch, Fancy Ribbed stitch; the Raised Plaid stitch, the Nubia stitch, Shell stitch, Unique stitch, Tidy stitch, etc. It is now the standard machine for manufacturing, and the only family knitter that fills the bill. Local agents wanted. Send for circulars to

J. J. PFISTER & CO., General Agents,
Manufacturers of knitted goods and dealer in woolen yarns.
120 SUTTER STREET, Room 46, San Francisco.

A Good Business For Sale.

THE YOLO AGRICULTURAL WORKS,

CONSISTING OF

WOOD and IRON WORKING MACHINERY

—AND A—

FOUNDRY,

Suitable for all kinds of Agricultural Manufacturing or House Building. Address,

BYRON JACKSON,
Woodland Yolo County, California.

Chance in the Nursery Business.

There is a good chance in Tehama County for a skilled man who will go to work and start a nursery. The location is one mile from Vina station, in Tehama County, in a good growing region of country; the land is first-class and water abundant. A man is wanted, with good references, who will start a first-class nursery in partnership with the owner of the land. Address,

S. C. DICUS,
Vina Station, Tehama County, Cal.



BURNHAM'S
WATER WHEEL
WARRANTED BEST & CHEAPEST.
Also, MILLING MACHINERY.
PRICES REDUCED APR. 20, '78.
Pamphlets free. OFFICE, YORK, PA.

Stock Notices.



SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

E. W. WOOLSEY,
Berkeley, Alameda County, Cal.

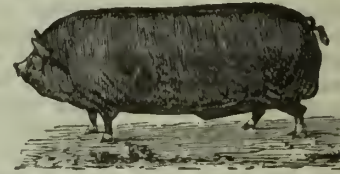
BERKSHIRES.



Breeder and Importer of the "Crown Prince," "Sambo," and "Bob Lee" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.

PETER SAXE, Russ House, San Francisco, and Los Angeles City, Cal.

BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,
18th and A streets, Sacramento City, Cal.

Poultry.

THOROUGHbred POULTRY.

116 Acres Unlimited Range.

DEVOTED TO

FANCY POULTRY. Largest Yards on the Coast.

Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.

Safe arrival of Fowls and Eggs Guaranteed.

Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents. Address

M. EYRE, Napa, Cal

EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

C. HERRMANN'S



FALL STYLE HATS NOW OUT!

At No. 336 Kearny St., bet. Bush & Pine,

—AND—

910 Market St., above Stockton,
SAN FRANCISCO.

Send for our Illustrated Catalogue.

Engraving [Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the Mining and Scientific Press, San Francisco, at favorable rates. Send stamp for our circular and samples.

Battle of the Books.

We take the following from the *Argonaut* of Saturday September 7th. We think it well for persons and associations interested to be well posted in the matter before investing their money in expensive works.

General H. D. Watson, of Johnson's Cyclopaedia, reconnoiters in force, and captures the very light brigade that Appleton throws out as skirmishers. Knowlton must get his Ebenezer up, brandish his little hatchet, and come scalping back upon the war-path. Chawink-sky, Warsaw's last champion who shrieked when Appleton's Cyclopaedia fell, must rally for another bluff. In this battle of the Cyclopedias, the schoolmaster and the second-hand dealer in old clo'-th-covered novels seem to be getting the worst of the conflict. Watson's last broadside is thus entitled:

The Lost Cause and Ebenezer Knowlton.
Appleton's revised American Cyclopaedia is blighted and doomed. It deserves to be, for it has falsified the facts of history in the interest of a church which has for centuries stood in the way of human liberty and intellectual progress. Let intelligent American parents and patrons and friends of our Public Schools ask themselves the question, Why are the Catholic priests and Jesuitical foes of our Public School system so strenuous in their efforts to force this lying Cyclopaedia into the schools of this State? Why do they so zealously recommend the faithful of their flocks to buy this costly and worthless production? No doubt their object is to preserve the minds of the school children of this State and the hearts of their parishioners free from the taint of sectarian prejudice! They have every confidence in a book made by Father O'Reilly, and most heartily sanctioned by Cardinal McCloskey. Why shouldn't they?

And now comes the redoubtable "Professor" Ebenezer Knowlton, after his perilous ascent of Mount Shasta, "alone without a guide" (?), with his deep chest and brawny arms and his "words of learned length and thundering sound," to prop up the falling fortunes of James T. White and his blighted Cyclopaedia. The "Professor," however, "having jointly and severally in the aggregate examined over a thousand test topics," comes to the sage conclusion that "the American Cyclopaedia is unquestionably and very decidedly the better book." The learned "Professor" would do well to invest twenty-five cents in a composition primer and devote his next year to the mastery of its contents before he ventures to appear before the public in the role of a literary critic. I trust that those who know me will give me credit for possessing too much discernment and knowledge of men and things ever to leave to Ebenezer's determination the merits of Johnson's Cyclopaedia, or of any other book. For the benefit of those who do not know me, I will state that I never challenged White to leave the two Cyclopedias to the judgment of Ebenezer Knowlton, or to the judgment of any committee of which the renowned Ebenezer was a member.

The "Professor" accuses me of attempting to bribe him! Will the doughty "Professor" tell the public when, where and how? I assert that I never tried, either directly or indirectly, to bribe Ebenezer Knowlton, and I defy him to prove that I ever did. It is hard for me to say this where many young ladies still live to whom the immaculate "Professor" once exclaimed, "My children, you see before you a man who, thanks to the training of his good mother and the kindness of his Heavenly Father, never told a lie." Oh! Ebenezer, lesser than Washington, yet better, how has the mighty fallen into the hands of Appleton's agent.

And now a word or two in reference to the card of th almost equally renowned Choynski, the far-famed anti quarian who sells second-hand books on Geary street. Let me inform the gentle antiquarian that either he or his friend White can have all the Appleton's American Cyclopedias which he or his friend will furnish bonds to pay for, at the following rates: Revised, in sheep, for \$60; agents' price, \$96. Condensed American, 4 vols., \$19; agents' price, \$33. On my return to the city last Saturday I found three cards from the courteous Choynski in my post-office box, in one of which he threatened to publish my offer in last Sunday's *Chronicle* as mere buncombe. Now, to settle this question forever, I hereby challenge either Choynski or White to place \$6,000 in the Bank of California of this city, and if I do not deliver at any place they may direct one hundred sets of Appleton's Revised 16 vol. American Cyclopaedia for \$6,000 within ninety days, I agree to forfeit \$100 for every set I fall short, and I will place \$6,000 in bonds in the above mentioned bank as an evidence of my good faith in making this proposition. Among the one hundred sets which am ready to furnish will be those that were kicked out of the Oakland schools by the unanimous vote of the Board of Education of that city, in order to make room for Johnson's Cyclopaedia. White has not accepted my challenge, which, I submit, was a fair one. Neither he nor D. Appleton & Co. dare accept it. I dare Choynski or White to put up money to take Appleton's Cyclopedias at \$60 a set.
H. D. WATSON.

HEALD'S BUSINESS COLLEGE,
24 Post Street,
Near Kearny,
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instructions given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

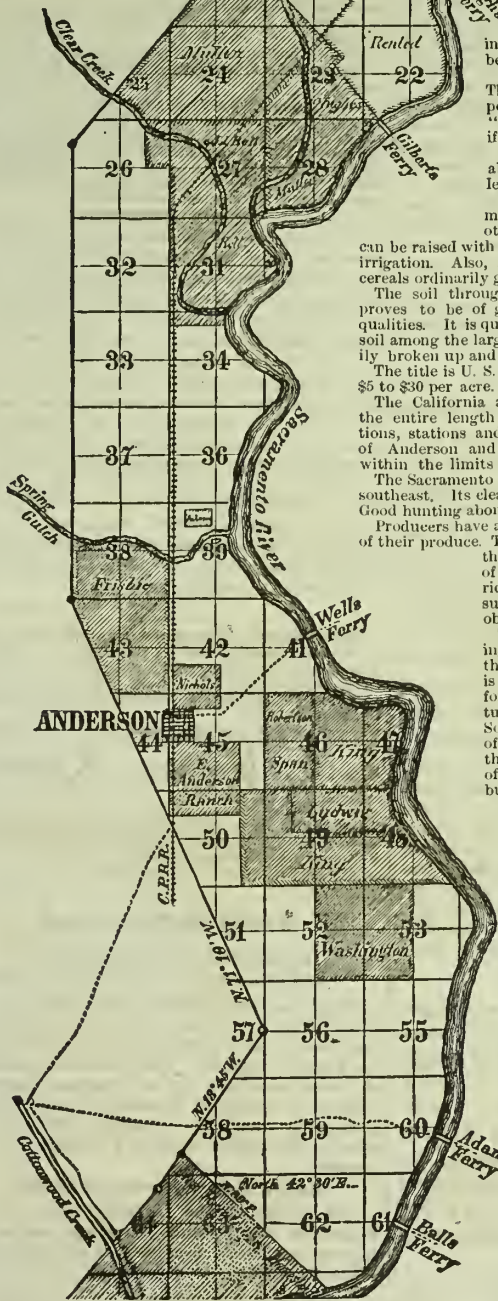
LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.
TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars, **E. P. HEALD,** President Business College, San Francisco, Cal.

18 ELEGANT new style Chromo Cards, with name, 10c., postpaid. GEO. I. REED & Co., Nassau, N. Y.

READING RANCH,
Shasta Co., Cal.

Good Land!
Sure Crops!
HEALTHY CLIMATE!
Prices Low. Terms Easy.
TITLE PERFECT.



The Reading Ranch, in the Upper Sacramento valley, originally embracing over 26,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drought.

The climate is healthy and desirable. The near proximity of high mountain peaks give cool nights during the "heated term" which occurs in our California summers.

Pasturage, wood and good water are abundant. The tillage land is mostly level, with complete drainage.

Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract without irrigation. Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the tilled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor,

EDWARD FRISBIE,
Anderson, Shasta Co., Cal.

P. S.—Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

Location of Shasta County.

Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 169 miles; from Marysville, 117 miles.

BERMUDA GRASS

Roots and Cuttings For Sale,

Ready for Delivery after the First Rains.

R. J. TRUMBULL & CO.,

419 and 421 Sansome St., San Francisco.

MONEY TO LOAN

AT LOWEST RATES,

ON FIRST-CLASS COUNTRY REAL ESTATE AND OTHER APPROVED SECURITIES,

McAFEE BROS., Real Estate and Loan Brokers,
202 Sansome Street, - San Francisco.

SUMMER RESORT.

Exhilarating Climate! Grand Scenery!!

Persons intending to spend a few weeks in the country during the summer months should stop at the **Bridge House**, on the South Yuba. Accommodation may be had for a few more boarders by addressing Mrs. R. H. CULBERTSON, Emigrant Gap. House only one mile on the station.

WANTED,

To Rent, a Good Grain or Stock Ranch,

Partly or wholly furnished. Address,

A. H. WILSON,
Post-office Box 435, Oakland, California.

A Country Store Wanted.

GLEASONVILLE, TEHAMA CO., CAL.,

May be found a good place to open a country store. We have just finished a splendid new building. It is now ready for goods, and we will rent it on reasonable terms. This place is in the midst of a rich farming country, where crops have never been known to fail. The nearest stores are from 15 to 18 miles distant.

The town of Gleasonville has a good hotel, blacksmith and shoe shop and saloon, but no store. The storekeeper could use from \$8,000 to \$10,000 to advantage, but can do a good business with less. A good man with money to command is wanted to open the store.

Address, **GLEASON & MASON,**
Gleasonville, Tehama County, Cal.

American Machine



Experimental and Fine Special Machinery, Planing and Gear Cutting, Printing Press, Band Instrument and General Machine Repairing; Dies, Taps, Punches, Reamers and other Tools made to order. Models and Patterns for Inventors promptly executed in Wood or Metals. 514 Commercial Street, between Sansome and Leidesdorff, Third Floor, San Francisco, Cal.

I. A. HEALD, Proprietor.

Day's Improved \$60 Automatic Incubator.

Simplest and best. Hatches and rears the chicks. Best possible endorsements. Address for circular, etc., **DAY BROS. & CO.,** 92 Linden Avenue, Baltimore, Md.

BREEDERS' DIRECTORY.

CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

GEORGE MCCracken, San Jose, Cal. Pure blooded Cotswold Sheep for sale.

POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importers and Breeders of Thoroughbred Poultry. Eggs for hatching.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

W. & J. ROBINSON, Hanford, Tulare Co., Cal., Importers and Breeders of Thoroughbred Berkshire Swine and Pure Brown Leghorn Fowls. Scotch Colley (Shepherd) Pups for sale. Imported parentage on both sides.

A. J. TWOGOOD, Riverside, Cal., Importer and Breeder of Pure Bred Poland-China Hogs.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

RUPTURE.

Another Wonderful Cure Effected by CALIFORNIA ELASTIC TRUSS!



CALIFORNIA ELASTIC TRUSS COMPANY, W. J. Horne, Proprietor.—DEAR SIR:—I feel that I owe it to you and to humanity to write the fact that I have been SUBSTANTIALLY CURED of a bad case of Rupture of 30 years' standing, by one of your incomparable Trusses, which I purchased from you three months ago. I cannot describe the suffering, both physically and mentally, that I have undergone during that period; and now I feel like a new being. I have worn all kinds of Trusses, both Steel and Elastic, and never received any permanent relief until I tried yours. Its simplicity of construction, and facility with which it can be adjusted, and the ease and perfect freedom to the motions of the body with which it can be worn without causing any irritation, are its chief merits, and it is a perfect supporter. I have not had any sign of a return of the Rupture since the first day I put it on, and feel that I am PERFECTLY CURED. It is invaluable, and the fact should be known to the world. You can refer anyone to me on the subject of their merits.

I am truly yours, **ALFRED J. BURKE,**
Chief Mail Clerk S. F. *Daily Evening Post.*
San Francisco, July 20th, 1878.

Endorsed by the Medical Profession.

San Francisco, July 9th, 1878.
California Elastic Truss Co.:
After practicing medicine many years in this city, during which time I have had an extensive experience in the application of all kinds of Trusses, I can and do recommend yours as the best in every respect, for it is as near perfection as modern science can make it. It has many advantages over the torturing steel-hoop Trusses, which inflict great injury on the hips and spine, bringing on other distressing ailments, such as lumbago, morbid affections of the kidneys and numbness in the lower limbs, all of which are avoided by wearing the California Elastic Truss. It is not only a perfect retainer, combining ease and comfort, but the pressure can be changed to any degree. It also remains in the proper place at all times, regardless of the motions of the body, and is worn night and day with perfect ease. It is superior to any of the Elastic Trusses now in the market, while it combines the merits of all. 1st.—It is easily adjusted on and off with snaps, doing away with straps and buckles. 2d.—The universal spring between the plate and pad prevents all irritation, which is a godsend to the sufferer. 3d.—The pad is adjusted on and off in an instant, and can be changed for any other size and form most suitable to the case. In fact, it combines every quality essential to comfort and durability, and is unequalled in lightness, elasticity, natural action, and artistic finish. Many of my patients who are afflicted with hernia are wearing them, and all shall in the future, for I think the great ease by which these purely scientific appliances are made efficacious, is truly remarkable. You can refer any parties to me on the subject of their merits. I remain yours truly,
L. DEXTER LYFORD, M. D.,
Physician and Surgeon,
600 Sacramento street, San Francisco.

A Physician's 45 Years' Experience.

COLUMBIA, Tuolumne Co., July 16th, 1878.
W. J. Horne, Esq.,—DEAR SIR:—For some time past I have used, in my practice, the California Elastic Truss, with entire satisfaction in most cases of complicated hernia of both sexes. During a practice of 45 years I have found no Truss that would, with the same ease and certainty, retain the required adjustment, the pressure being always under the immediate control of the patient. The simplicity and ease of application is of itself a guarantee to every experienced physician. I have the honor to remit by mail the amount due, knowing that I contribute to the alleviation of afflicted humanity.

Yours truly, **J. P. TIBBITS, M. D.**
It is constructed on scientific principles and sells on its merits. If you want the best Truss ever manufactured, don't forget the name and number.

Trusses forwarded to all parts of the United States at our expense, on receipt of price.
Send for Illustrated Catalogue and Price List, giving full information and rules for measuring.

CALIFORNIA ELASTIC TRUSS CO.,
615 Sacramento Street, San Francisco, Cal.

Notes at the State Fair.

Reference to the State fair premium list, printed elsewhere, will show that Mrs. C. H. Sprague, of Woodland, was one of the leading prize takers in the poultry department. She is entitled to much credit for her efforts in producing fine poultry; and her yards at Woodland are called upon to furnish many birds to those who are improving their stock or making a start in poultry breeding. She has nearly all the leading breeds in hand.

Many persons were interested in examining the Excelsior entrance gate, which can be opened and shut without alighting from any vehicle or load of hay. It is so arranged that there is no strain on gate or post and can be adapted to any gate without expense. It is simple, cheap and durable. It is also portable and not set into the ground. No castings are required. The gate was awarded medal at world's fair, 1876; and numerous premiums at the fairs in the country. For particulars apply to H. Brightman, Placerville, El Dorado county, Cal.

E. E. Ames, of No. 49 G street, Sacramento, made a fair and substantial display, including the celebrated Studebaker farm and freight wagon, a four spring, full-top wagon, and two-seat platform spring wagon, one single seat top buggy, one M. C. Cornick & Co.'s self-binder harvesting machine, B. F. Avery & Sons' gang and single plows, Furst & Bradley's stubble and tulle plows, Sacramento Plow Co.'s screw mower and gang, single and Granger plow. Their store is well stocked with wagons of various styles and sizes, offered and guaranteed fully at prices demanding the attention of purchasers who have use for first-class articles in their line.

Orchardists should not fail to send for descriptions of the "Boss pruner," which was shown at the fair by George Larkin, Newcastle, Placer county, Cal. It works on an entirely new principle, and cuts small and large branches perfectly. It has been thoroughly tested, and we are informed, has given perfect satisfaction.

Among the fine exhibits of D. C. Hayward's semi-tropical nursery at Orange, in Los Angeles county, was a sweet lemon of which we hope soon to give an engraving. Mr. Hayward's oranges and lemons of different varieties attracted much attention at the fair. His advertisement in another column should be read.

Mr. F. J. Barretto, of Downey City, Los Angeles county, was exceedingly successful in showing his fine Jerseys at the State fair. He showed 12 head and took 8 premiums. Mr. Barretto proposes to bring this fine blood within the reach of all; and all dairymen should read his card concerning the loan of bulls, etc., in our advertising columns.

An invention of which we propose to speak more fully hereafter, and give an illustration, is Thomas' improved apple parer, corer and slicer, which was exhibited by J. R. Crandall, of Auburn, Placer county. This seems to us a very desirable device for doing an important work, and those in immediate need of such a machine should address Mr. Crandall at once.

The premiums for Angora goats at the fair may be found elsewhere. A reporter for the *Record-Union* interviewed the breeders, and they make the following statement to the public: "General success in breeding has been met with on the entire Pacific coast; also, in the production of a good article of mohair; also, that a good and sufficient market for cash has been developed, both in the United States and England, at remunerative prices; that none but the best thoroughbred bucks should be used in the flock; that the outlook for the business for the future is very good—more encouraging than at any other previous time; that the drouth of 1877 has proved that the goats are proof against the dry seasons, no goats having been lost on the same ranges where thousands of sheep have starved; that foothills and mountainous districts are the best for goat raising and for mohair production. Barry regions should be avoided in all cases."

The enterprising way in which Mr. Thomas A. Garey, of Los Angeles county, is working for the development of the orange resources of our state is widely known. He gives all branches of the subject his full interest and attention, and he has fully invested his money in an enterprise which is worthy of the encouragement of all. He made a good point by his display at Sacramento. His lecture which he sends to all

applicants, should be requested by all contemplating planting orange trees.

Water Filters.

The subject of filtering water for drinking purposes in cities and towns deserves greater attention than it has heretofore received. Sacramento city is especially interested in the question, and here is what the *State Fair Gazette* says of a popular invention, under the head of "Important to Sacramentans:"

The invention which we are about to speak, is the discovery of Mr. Jordan Peters, of Petaluma, and Thomas C. Walters, of San Francisco. It is an improvement in filters and water coolers, and is so simple and practical that it should engross the attention of every one. It is attached directly to the water pipes in the house, and filters and cools the water as it comes from the pipes, furnishes the water cool, clear and thoroughly purified. It occupies a very small space, and is no trouble whatever to take care of, as the simple turning of a faucet will clean the apparatus at once. It will never clog up, performs its work perfectly and is more convenient than any cooler and filter we have ever seen before. It is attached to the hydrant in the pavilion, and is there performing its work. Hotels and saloons could not be induced to remain without one, if they knew and understood its working. Particulars concerning the above can be had by addressing Thos. C. Walters, 612 Greenwich street, San Francisco, or Jordan Peters, Petaluma, Cal.

FLORAL SHOW AT GOLDEN GATE FAIR.—We are informed that our reporter at the Golden Gate fair, was misinformed concerning the floral display. Mr. W. F. Kelsey had the best display of greenhouse and conservatory plants and was awarded a premium therefor. There were three other leading exhibitors. One was Keller & Blair who were awarded a premium for rustic work and plants; another was A. D. Pryal, of North Temescal, who received several prizes in the different classes of floral displays, and a diploma for his new variegated Italian cypress, called "Pryal's Golden Cupressus pyramidalis." E. R. Hall received a diploma for rustic stand and flowers. G. J. Nicholson was awarded a premium for ornamental plants, and W. Meyer three premiums for fuchsias, hanging baskets and flowering plants. Mr. E. Gill secured three premiums for roses, ornamental foliage plants and cut flowers, and John Filmore for rustic baskets. Thus it appears that a number of persons are entitled to credit for aiding in the floral display, and this was supplemented with young eucalyptus and cypress trees from Bailey & Co., of Berkeley, and Mr. Pryal of Temescal.

COMFORT IN SLEEP.—One of the newest patented exhibits which attracted much attention from all, except bashful, newly married people, at the Sacramento State fair, was T. Woodward's clothes clamps for bedsteads. The device is so simple that the most stupid of all servants can operate it instantly and make all the clothing fast in proper position at the foot of the bed. The device is applicable to old as well as new bedsteads. The inventor's address is No. 56 Eleventh street, Sacramento.

TUOLUMNE COUNTY FRUIT.—Mr. H. Quin, of Columbia, Tuolumne county, entered at the State fair a remarkably fine lot of peaches, grapes and other kinds of fruit, which, for freshness and fairness in looks, was not excelled. Although entered too late for competition the committee, we are told, recommended a special premium.

The California Sack Holder.

Among the many new inventions and labor-saving contrivances that have been introduced to the public, there is none that recommends itself so fully and readily as the California sack holder. By its use the labor of one man is saved, and the sacking of grain instead of being the tiresome "back-breaking" work as heretofore, becomes light and agreeable. In fact a boy can operate it as well as a man. The sackholder, like most of the more useful inventions, is very simple in its construction, and it is next to impossible to get it out of order. It is light, weighing but about 17 pounds, and will last though constantly used for years. It is adjustable to any sized sack, and allows no wastage whatever. We consider that it is one of the most useful California inventions we have seen. The patentees deserve to realize the handsome profit we predict for them, and we feel warranted in making the prediction from the large number of people who nightly examine its practical workings at the Mechanics' Pavilion, and the great number of orders the agents are receiving.

POPULAR MUSIC.—Make your homes merry and popula with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 106 Kearny Street: The *RURAL PRESS* can offer to introduce you there.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

WEEK ENDING SEPTEMBER 10TH, 1878.

CHECK-REIN HOOPS—David H. Clippinger, Brighton, Cal. STRADDLING GAUGE AND GLASS TUBE CUTTERS—William Heyn, S. F. SCREW CUTTING LATHE—Alpheus F. Cherry, Albany, Ogn. ONE WASHERS AND AMALAMATORS—John H. Hobart, Oakland, and John T. Best, S. F. HOOKS—Frank Kortick, S. F. DETRITUS PUMPS—Eugene Moreau, S. F. FURNACES FOR ROASTING ORES—David J. O'Harra, Reno, Nevada. REFINING BASE BULLION—Leopold Ballback, S. F. TRADEMARKS—A. M. Fletcher and James McVoy, S. F., paint.

The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

THE ORLEANS HOTEL, Sacramento, has lately been improved and entirely refurnished with new furniture. It has long been popularly known as headquarters for strangers in the city upon all extra occasions. During the late State fair its rooms and halls were crowded with representative guests from all parts of the State. The accommodations are good for families and single persons. The table management is excellent under the practiced stewardship of Mr. John Reynolds, formerly of San Francisco. Its location is very convenient, and the accommodations given for the reasonable rates offered render the Orleans worthy of the attention of visitors to the capital city.

UNION FREE READING ROOM, San Jose, Cal., Sept. 20, 1878.

MR. A. T. DEWEY.—Dear Sir:—The package of assorted fileholders (your patent) are received as per order, and permit me to say they are far superior to any other handy fileholders that I ever saw. Truly yours,

S. H. HERRING.

Woodward's Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a box-constrictor have just been added. New stars are constantly engaged for the Pavilion exercises. Rates of admission as usual.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, September 25th, 1878.

There has come another quiet week in the Grain trade. Whenever prices have changed they have graded downward in sympathy with the English market. The immense quantities of Grain now arriving in England must be allowed to distribute themselves, and then an awakening may be expected, although, of course, the future price is a matter of conjecture.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.		CLUB.	
Thursday....	10s	@10s 2d	10s	3d@10s 5d
Friday.....	9s	9d@10s	10s	@10s 4d
Saturday....	9s	9d@10s	10s	@10s 4d
Monday.....	9s	9d@10s	10s	@10s 4d
Tuesday....	9s	9d@10s	10s	@10s 4d
Wednesday..	9s	9d@10s	10s	@10s 4d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.		Club.	
1876.....	9s	8d @ 9s 11d	9s	11d @ 10s 1d
1877.....	12s	6d @ 12s 10d	12s	9d @ 13s
1878.....	9s	9d @ 10s	10s	@ 10s 4d

Freights and Charters.

The *Call* says: The unsettled condition of the Wheat market still stands in the way of shippers, and there is very little demand for additional tonnage. Wooden vessels can be had for a direct British port, for Wheat, at 40¢ @ 42s. 6d. There are now in port 46,113 tons loading General Merchandise. On the way and loading for this port, so far as known, 151,000 tons.

The Foreign Review.

LONDON, September 24.—The *Mark Lane Express* says: The cool weather during the past week, with intermittent showers, which told unfavorably upon the condition of new Wheat, but not to a serious extent, has impeded the gathering of the cereal crops in the later districts. Harvest is now practically ended, except in Scotland and certain northern localities. Wheat has yielded fairly as far as can be seen, but dry weather is now desirable for threshing. The bulk of grain has been secured in Scotland, but some quantity is outlying. It is considered that although somewhat deficient in straw, the crops are generally better than last year. The markets are now beginning to be well supplied with new Wheat, but the damp and sprouted state of offerings has had a depressing effect on trade. There has been very little demand for

Wheat, owing chiefly to continued large shipments from America, coupled with liberal supplies of home-growth at our own markets. Maize has given way about sixpence per quarter, with very little demand for shipment. Cargoes from America continue to arrive in an unsatisfactory state.

Eastern Grain Markets.

NEW YORK, September 21.—The export trade has been comparatively dull, though the French demand for Wheat still holds on in a way that suggests greater shortage in foreign countries than had been supposed. The English, as usual when the French are operating, pursue a waiting policy. With so large an American surplus, they are in no hurry to lay in stocks in advance of their requirements, and evidently believe they will be able to buy cheaper later on. Meantime, with large receipts, prices have given way 2¢ @ 3c., the bulk of business having been at \$1 @ \$1 10 for Red Wheat, with inferior as low as 95c.

CHICAGO, September 21.—The grain markets are pretty steady, but lower on the whole range. Receipts are very heavy, but the demand keeps up, and prices are fairly sustained. October Wheat during the week, fluctuated between \$7 @ \$9 1/2. Corn was also easier, closing at the lowest price for the week. Sales of October at 35¢ @ 35 1/2. Oats are weak, easier; 19 1/2 @ 21 1/2 for October, cash. Rye, 45¢ @ 45 1/2; Barley, 104¢ @ 106. Provisions have been moderately active, but less irregular than usual, and rather higher. Sales of October Pork at \$8 3/4 @ \$8.90; Lard, October sales, \$6.57 1/2 @ \$6.80.

Eastern Wool Markets.

BOSTON, September 21.—In Wool there is no material change: There is some inquiry for fine fleeces, but the demand still runs on medium and low-priced Wools. At the same time, holders are not pressing their fine Wools on the market, and prefer to sell in small rather than in round lots, at current rates. Combining and delaine fleeces remain unchanged. These Wools are taken as fast as graded. Transactions for the week comprise 160,000 lbs at 38¢ @ 43c for washed, and 28¢ @ 30c for unwashed; the bulk of sales at 40¢ @ 42c. A lot of 13,000 lbs of new and superior Fall California sold for 22c. Sales of Spring, 256,000 lbs, at 24c, mostly good and choice. Northern Wool, 26¢ @ 30c.

NEW YORK, September 21.—The volume of Wool business during the week has reached very satisfactory proportions, though the demand from manufacturers is still chiefly for medium grades. The new Fall California arriving meets with but little favor, as the quality and condition do not come up to the standard that manufacturers desire. There has been little or no speculative feeling manifested during the week; the sales reported entering directly into channels of consumption. Carpet Wools are neglected. Sales for the week include: 110,000 lbs Spring California at 20¢ @ 24c; 45,000 lbs Fall do, 15¢ @ 17 1/2c; 30,000 lbs Colorado, 21¢ @ 23c; 52,500 lbs Oregon, 22¢ @ 25c; 40,000 lbs Western Texas, 14 1/2¢ @ 18 1/2c; 27,000 lbs Spring do, 22¢ @ 25c; 65,000 lbs X and above Ohio, 36¢ @ 38c; 10,000 lbs No. 1 do, 37c; 40,000 lbs combining and delaine, 40¢ @ 45c; 13,000 lbs fine and medium Wisconsin, 33¢ @ 35c; 5,000 lbs fine Western, 33c; 10,000 lbs unwashed do, 24c; 2,000 lbs washed, Dutchess county, 36c; 2,000 lbs unwashed do, 27 1/2c.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Sept. 4.	WEEK. Sept. 11.	WEEK. Sept. 18.	WEEK. Sept. 25.
Flour, quarter sacks.....	45,92	67,152	75,841	40,235
Wheat, centals.....	440,053	572,818	533,024	550,223
Barley, centals.....	61,355	48,902	71,424	77,051
Beans, sacks.....	1,832	1,149	2,106	6,259
Corn, centals.....	682	1,900	2,410	3,338
Oats, centals.....	5,739	2,352	7,415	19,461
Potatoes, sacks.....	10,741	10,683	11,845	20,214
Onions, sacks.....	1,207	1,011	890	571
Wool, bales.....	4,265	2,379	4,554	4,373
Hops, bales.....	191	485	618	902
Hay, bales.....	2,318	1,946	1,787	1,705

BAGS.—The Ring has put on the screws again, and Standard Grain Bags have advanced to 14 1/2¢; 23 by 40in, 15 1/2¢; Bean Bags, 8¢ @ 9c.

BARLEY.—Barley has sold rather slowly, as but little of fine quality is offering. We note sales: 1,100 sks bright Coast, at \$1; 144 fair Coast, at 95c; 200 Bay Feed, mixed with cheat, at 95c; 135, 200 and 200 dark Coast, 90c @ 91c.

BEANS AND PEAS.—New Beans are arriving freely, and prices are again lowered. We note sales: 50 sks Pea Beans sold at \$4 50, and 50 do Bayo at \$2 62 1/2 @ 91c. 450 bags Common Field Peas sold at \$1 25 @ 91c.

CORN.—New Corn is also coming in in good amount, but not yet dry enough for millers. We note sales: 200 sks small Yellow at \$1 12 1/2c; 50 do, at \$1 15; 200 do, at \$1 17 1/2; 200 large Yellow (green), at \$1 10; a lot of large White at \$1 12 1/2 @ 91c.

DAIRY PRODUCE.—Fancy brands of strictly fresh Roll Butter have advanced to 37 1/2¢ @ 40c, while ordinary grades are held down by the large amounts of Pickled and "made over" stock. Cheese is in large amount, and prices unchanged.

EGGS.—Eggs are a shade lower.

FEED.—There is no important change in Ground Feeds. Hay is quiet; we note sales: 40 tons good Stable sold at \$11, and 30 tons fair Stable at \$9; 30 tons of fair Cow, at \$8 50; 500 bales Cow and poor Wheat, at \$8 50; 100 do good Stock, at \$7 50.

FRESH MEAT.—Fresh Beef is temporarily

a drug in the market from large arrivals. Fresh Mutton unchanged and supply large. Hogs have lower tendency from large arrivals, which promise to increase.

FRUIT—Our list shows an improvement in Peaches, Pears and Prunes.

HONEY—Sales are slow. We hear of 14,000 lbs Strained sold at 5c.

HOPS—Hops are arriving and mostly held above buyers' views. We hear of sales of 100 bales Russian River and Lake County in small lots at 12½c. New York reports are of a quiet trade, and Pacific Coast Hops are quoted nominal at 5 to 10c. English advices say that mold is increasing.

OATS—The Oats offered are mostly poor. A choice article would bring a full price. We note sales: 180 sks fair Humboldt Feed at \$1 35; 200 fair Feed at \$1 40, and 380 choice at \$1 60 per cwt.

ONIONS—Onions have sharply advanced since last week, until they are now worth \$1@1 25 per cwt more than last week. All good Onions are worth to-day \$2 15@2 50 per cwt.

POTATOES—Changes are unimportant, except in Sweeties, which are much lower, ruling at 75@87½c per cwt.

PROVISIONS—Provisions are in strong demand, at unchanged prices. Eastern Hams are scarce and high, very few reliable brands being in the market. Beef and Pork are low, and our local packers are operating freely.

POULTRY AND GAME—Hens and Roosters have declined \$1 50@2 per doz. Other sorts are unchanged.

VEGETABLES—Horse Radish is scarce, being quotable at 8@10c per lb, and not to be had at that.

WHEAT—Local prices have shaded down a little. We note sales: 2,800 cwt good Milling, at \$1 67½; 3,000 average Shipping, and 2,500 good Walla Walla, at \$1 65; 500 fair Shipping, at \$1 62½; and 400 slightly pinched, at \$1 60 per cwt; and 2,300 sks choice Milling, at Vallejo, at \$1 65.

WOOL—Prices are still somewhat in doubt. Poor, defective lots are unsalable now at any price. The quotations which we give are nominal, but cover the few sales of good Wools which are being made: San Joaquin, 9@10; Northern, bright, 13@15; Mountain, free, 11@12½c.

DOMESTIC PRODUCE.

[WHOLESALE.]

[WEDNESDAY M., September 25, 1878.]

BEANS & PEAS.		NUTS—Jobbing.	
Bayo, etc.	2 62½@	Walnuts, Cal.	8 @ 9
Butter.	— @ —	do Chile.	7 @ 8
Peas.	4 50 @	Almonds, hd sh lb	7 @ 8
Red.	2 25 @ 2 37½	Soft sh lb	14 @ 16
Pink.	2 37½ @ 2 50	Brazil.	14 @ 16
Sm'l White.	— @ 37½	Pecans.	13 @ 14
Lima.	— @ —	Peanuts.	5 @ 6
Field Peas.	1 25 @	Filberts.	15 @ 16
BROOM CORN.		ONIONS.	
Old.	34 @ 7	Alviso.	2 25 @ 2 50
New.	41 @ 8	Union City, etc.	2 25 @ 2 50
CHICORY.		San Leandro.	2 25 @ 2 50
California.	4 @ 41	Stockton.	2 25 @ 2 50
German.	61 @ 7	Sacramento River.	2 25 @ 2 50
DAIRY PRODUCE, ETC.		POTATOES.	
BUTTER.		Petaluma, etc.	1 00 @ 1 25
Cal. Fresh Roll, lb	27½ @ 32½	Humboldt.	— @ —
Fancy Brands.	37½ @ 40	Cuffey Cove.	1 40 @ 1 50
Pickie Roll, new.	25 @ 27½	Early Rose.	1 10 @ 1 35
Piggin, new.	20 @ 25	Half Moon Bay.	1 25 @ 1 37½
Western.	14 @ 16	Kidney.	— @ —
New York.	— @ —	Sweet.	75 @ 87½
CHEESE.		POULTRY & GAME.	
Cheese, Cal., lb.	8 @ 12½	Hens, doz.	6 00 @ 7 50
Eastern.	10 @ 12	Roosters.	4 50 @ 6 00
N. Y. State.	— @ —	Brothers.	3 50 @ 4 50
Gilroy Factory.	11 @ 13	Ducks, tame.	6 00 @ 7 50
Eggs.	— @ —	do, Mallard.	4 00 @ 4 50
Cal. fresh, doz.	37½ @ 40	Geese, pair.	2 00 @ 2 50
Ducks.	— @ 30	Wild Gray, doz.	— @ —
Oregon.	30 @ 32½	White do.	— @ —
Eastern.	18 @ 22	Turkeys.	20 @ 23
do by express.	30 @ 32½	do, Dressed.	— @ —
Pickled here.	27½ @	Snipe, Eng.	3 00 @ —
FEED.		do, Common.	50 @ 75
Bar. ton.	— @ 16 00	Quail, doz.	1 00 @ —
Corn Meal.	40 00 @ —	Rabbits.	1 50 @ —
Hay.	7 00 @ 14 00	Hare.	3 00 @ 3 50
Middlings.	22 00 @ 24 00	Venison, lb.	10 @ 12½
Oil Cake Meal.	34 00 @ —	PROVISIONS.	
Straw, bale.	25 @ 60	Cal. Bacon, Hvy. lb	11½ @ 12
FLOUR.		Medium.	12 @ 12½
Extra, bbl.	5 12½ @ 5 37½	Light.	13 @ 13½
Superfine.	4 25 @ 4 50	Lard.	11 @ 13
Grain, lb.	3 @ 3½	Cal. Smoked Beef	10 @ 10½
FRESH MEAT.		Shoulders, Cover'd	7½ @ 8½
Beef, 1st qual'y, lb	5½ @ 6	Hams, Cal.	12½ @ 13½
Second.	4 @ 5	Dupee's.	17 @ 17½
Thrd.	2 @ 3½	None Such.	16 @ 17
Mutton.	3½ @ 4½	Ames.	— @ —
Spring Lamb.	5 @ 6	Whittaker.	— @ —
Pork, undressed.	4½ @ 4	Magnolia.	17 @ 18
Dressed.	6½ @ 6	Reliable.	17 @ 13
Veal.	5 @ 7	SEEDS.	
Milk Calves.	7 @ 7½	Alfalfa.	5 @ 12
do choice.	8 @ 8½	Canary.	4 @ 4½
GRAIN, ETC.		Clover, Red.	15 @ 16
Barley, feed, etc.	99 @ 105	White.	50 @ 55
Brewing.	1 15 @ 1 25	Cotton.	6 @ 10
Chevalier.	1 75 @ 1 90	Flaxseed.	3 @ —
Buckwheat.	1 50 @ —	Hemp.	6 @ —
Corn, White.	1 10 @ 1 15	Italian Rye Grass	35 @ —
Yellow.	— @ 10	Perennial.	35 @ —
Small Round.	1 12½ @ 1 17	Millet.	10 @ 12
Oats.	1 25 @ 1 52½	Mustard, White.	23 @ 38
Milling.	1 55 @ 1 60	Brown.	14 @ 2
Rye.	1 27½ @ 1 30	Rape.	3 @ 4
Wheat, Shipping.	1 62½ @ 1 67½	Ky Blue Grass.	20 @ —
Milling.	1 67½ @ 1 70	2d qual'y.	18 @ —
Off Grades.	1 40 @ 1 60	Sweet V Grass.	1 00 @ —
HIDES.		Orchard.	25 @ 30
Hides, dry.	16 @ 16½	Red Top.	18 @ 20
Wet salted.	7½ @ 9	Hungarian.	8 @ 10
HONEY, ETC.		Lawn.	50 @ —
Beeswax, lb.	30 @ 31	Mesquit.	9 @ 25
Honey in comb.	11½ @ 13	Timothy.	9 @ —
do No 2.	8 @ 9	FALLOW.	
Dark.	8 @ 9	Crude, lb.	71 @ 71½
Strained.	5 @ 5½	Refined.	9 @ 9½
HOPS.		WOOL, ETC.	
Oregon.	3 @ 5	FALL.	— @ —
California.	10 @ 12½	San Joaquin.	9 @ 10
Wash. Ter.	4 @ 6	Northern, bright.	13 @ 15
		Mountain, free.	11 @ 12½

Gold, Legal Tenders, Exchange, Etc

[Corrected Weekly by SUTRO & Co.]
SAN FRANCISCO, September 25, 3 P. M.
LEGAL TENDERS IN S. F., 11 A. M., 92½ @ 93.00. SILVER, 11½ @ 2. GOLD IN NEW YORK, 100½
GOLD BARS, 890 @ 910. SILVER BARS, 82½ @ 83 cont. dis count.
EXCHANGE ON NEW YORK, 4½; on London bankers, 49 @ 49½. Commercial, 50; Paris, five francs, 50 dollar; Mexican dollars, 83 @ 81.
LONDON CONSOL, 94 13-16; Bonds, 108½.
QUICKSILVER IN S. F., by the flask, 71 @ 71½.

Vertical Feed Victorious.

THE NEW
"DAVIS VERTICAL FEED"
Lock-Stitch Sewing Machine.
Lightest running Shuttle Machine in the world.

SO CONFIDENT ARE WE THAT THE
VERTICAL FEED

(Which is as far in advance of the old feed used on all other machines as steam is ahead of horse-power, and is the exclusive property of this company), is the
ONLY POSITIVE SUCCESS
In all Departments of Sewing, that we make the following offer:

One Thousand Dollars

Will be given to any person (sewing machine experts included) who will, with any other sewing machine, follow the "DAVIS VERTICAL FEED" through its vast range of practical work.
All lovers of progressive science and mechanical perfection should see it, and every lady in the land should examine and try the "DAVIS VERTICAL FEED" before deciding to purchase an inferior machine, or a single-thread plaything without a tension.
It is impossible to make a strong, elastic, or lock-stitch with any but a shuttle machine.

We are selling WHEELER & WILSON, GROVER & BAKER, SINGER and HOWE Machines for \$10 Each.

For descriptive circulars, price lists, samples of work and terms, apply at the office of the

PACIFIC COAST DEPARTMENT,
130 Post Street, San Francisco, Cal
MARK SHELTON, AGENT.

Underfitted Machines taken in exchange as part payment. Our prices are very low for cash. Branch Office, 26 Fourteenth Street, Oakland, Cal.

DRAKE'S BAY COLONY.

Shafter's Rancho, Marin County, California.

13,600 ACRES,

Between North Pacific Coast Railroad and Pacific Ocean, three hours travel by steamer and railroad from San Francisco.

Schooners make the trip to Drake's Bay in six hours, and to Tomales Bay in nine hours. Produce can be shipped to market from the colony by schooner as well as by rail.

Title—United States patent.
Climate—Unsurpassed for mildness and equability.
Soil—Without exception the richest on the coast.
Water—Abundant. A failure of crop has never been known.
Wood—Sufficient for fire and fencing.

Agriculture—The soil, climate and situation render this property particularly adapted to those who wish desirable homes at a short distance from San Francisco. With the exception of tropical fruits, anything that grows in California can be produced upon this land.

This rancho, famous for its dairies, is now being subdivided into 20, 40 and 80-acre farms, under the auspices of the California Immigrant Union, and will be sold at low figures.

TERMS—One-fourth cash; balance in one, two and three years, with interest at eight per cent. per annum on deferred payments.

For full information, transportation, maps, etc., apply to

WM. H. MARTIN,
General Agent California Immigrant Union,
230 Montgomery Street, Room 23, S. F., Cal.

Parties desiring to visit the tract will be provided with tickets upon application as above

GREAT SLAUGHTER
IN SEWING MACHINES.

We are now offering for sale, at \$10 EACH, the following machines:

FLORENCE,
WHEELER & WILSON,
GROVER & BAKER.

THESE MACHINES ARE
Guaranteed to be in Perfect Order,

And many of them NEW.

Parties in the country can have them packed and shipped free of any extra charge. Address,

WILCOX & GIBBS Sewing Machine Co.,

No. 124 POST STREET,
SAN FRANCISCO, CAL.

ORANGES and LEMONS.

The best budded varieties of both native and foreign Orange and Lemon trees for sale. Prices to suit the times. For particulars address

B. C. HAYWARD,
Semi-Tropical Nursery, Orange P. O., Los Angeles Co., Cal.

Comfort and Health Promoted!

WOODWARD'S
Clothes Clamp, for Bedsteads.

Patented December 18th, 1877.

WE CLAIM:
1st.—It holds the bed clothes firmly to the footboard without injuring them in any way. 2d.—If the covering is short, the clamps will hold them in place, when nothing else will. 3d.—Clothing can be adjusted when clamped at the foot as well in the dark as in the light. 4th.—For erms and children's beds, it has no equal. 5th.—A woman can change clothing and make up three beds quicker and easier than she can make one without it. 6th.—When sheets are not to be changed, the clothes can be adjusted in two minutes. 7th.—Spreading on bedding with footboard turned down is as convenient as laying cloth on a table. 8th.—It hides all inequalities and leaves the bed covering much smoother than it can be made by tucking under. 9th.—The bedding can be thrown back over chairs to ventilate without opening the clamps, and adjusted again as easily as closing a book. 10th.—Turn down the footboard and the bedding can be removed in a body or separately much easier than from other beds.
The Fixtures Can be Applied to any Bed,
New or Old.

State and Manufacturing Rights for sale by
F. WOODWARD,
No. 56 Eleventh Street, Sacramento, Cal

WANTED.

500 TONS OF
RAISIN GRAPES and FIGS.

GEORGE A. DEITZ,

No. 81 J Street, Sacramento, California.

STUDEBAKER
WAGONS.

E. E. Ames, General Agent.
49 & 51 J STREET, SACRAMENTO.

Send for Catalogue and Price List.

ORLEANS HOTEL,

SECOND ST., bet. J and K, SACRAMENTO, Cal.

This large, POPULAR and FIRST-CLASS Hotel (lately improved) is only one block from the depot. It has Mosquito Proof Rooms, hot and cold Water Baths, Free. Prices of room and board reduced to \$2, \$2.50, and \$3 per day. Guests conveyed to and from the Hotel, free of charge.

RICHARDSON & PRESBURY, Prop's.

West Berkeley Lumber Yard,
ALAMEDA COUNTY.

(Successors to Z. B. Heywood & Co.)

Lumber, Shingles, Sash, Doors, Lime, Brick, and Builders' Hardware

Sold at the lowest San Francisco rates. Strict attention given Country Orders. Boats Loaded at the Wharf for all Points on the San Joaquin and Sacramento Rivers. Cars of the C. P. R. R. Co. loaded at the yard. Orders received at 22 California Street, San Francisco, or at the hardware store of G. W. Babcock, No. 955 Broadway, Oakland.

JOHN F. BYXBEE, Proprietor.
THOMAS RICHARDSON, Manager.

PACIFIC WATER CURE

— AND —

ECLECTIC HEALTH INSTITUTE,

Northwest corner of Seventh and I Streets,

SACRAMENTO, CAL.

M. F. CLAYTON, M. D., PROPRIETOR.

This Institution has been favorably known to the public as a Water Cure for nearly twenty years. At the beginning of last year it passed into the hands of the present proprietor, who has thoroughly renovated, fitted it up and furnished it with all the modern improvements and apparatus for the treatment of diseases and deformity to which the human flesh is heir. Chronic diseases receive special attention, such as pulmonary Consumption, Catarrh, Bronchitis, Rheumatism, Paralysis, etc. The patients are surrounded with all the comforts of home, with nurses of long experience and the best medical advice in the State.

Treatment per week\$10.00
Treatment and Board per week.....\$15 to \$20
Board per week\$4.00
Board and Lodging.....\$5.00
Russian Bath.....\$1.00
Eucalyptus.....1.00
Sulphur, Liquid or Steam.....1.00
Grindelia (sure cure for Poison Oak).....1.00
Steam......50
Electric......50
Spray......25

THE BOSS PRUNER.

Patented January 8th, 1878.

ENTIRELY NEW!

Works on a cog principle. Smallest size cuts one inch, and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

GEORGE LARKIN,
Newcastle, Placer County, California.

IONE VALLEY, Cal., January 20, 1878.

MESSES. DEWEY & Co.—Gentlemen:—I received my patent last night, and was glad to find that you were so prompt in the matter. I am pleased to give you the credit due you for the faithful and honorable manner in which you have discharged your duty in getting my patent. I shall hereafter recommend you to the public as having discharged your duty with honor. Yours, etc.,
W. W. CARLILE.

IMPROVEMENT IN
FILTERS AND COOLERS.

Patented July 31st, 1877.

— INTENDED FOR THE —
Perfect Purification of Water,

— AND A —
Reduction in Temperature Below that of any Well Water Possible in the Vicinity.

The use of ice as a medium of purification is deceptive, and only tickles the palate at the expense of good health. The use of ice is also expensive, and in many localities unobtainable. To overcome these difficulties the inventive genius of mankind has been thoroughly taxed, and the Patent Office is filled with models of different devices under the name of Filters and Coolers.

In presenting the

Peters & Walters' Filter and Cooler

To the public, we feel that we are doing good service to the community, and furnishing them with a machine that will be durable, and one that fully accomplishes the end for which it is intended.

For particulars or rights apply to

THOS. C. WALTERS,
612 Greenwich Street, San Francisco,
Or to JORDAN PETERS, Petaluma, California.

\$1 FOR 25 CTS.

Seven new and wonderful articles at one-fourth the retail price. Examine the list.

No. 1. Musical Pipe.—Made of metal, with bowl resembling a human face. By filling with water, will imitate perfectly the notes of any bird.

No. 2. Miniature Churn.—Suitable for neckties or watch chain. Size of gold dollar, yet has all the power of a churn. Price only 25 cents.

No. 3. Eureka Whistle.—Loud and clear whistle made. Very useful for sportsmen to exchange signals at long distances.

No. 4. Japanese Parasol.—Just imported. Prettiest, lightest, and most durable. Finished in beautiful colors. Splendid gift to a lady.

No. 5. Magic Spider.—Funnest thing out. A horrible looking spider, sure to make people jump out of their boots. Always creates an excitement.

No. 6. Musical Wonder.—A new instrument, on which any tune may be played, or sound imitated, from the wail of a cat to a French and Judy show. Pleases everybody.

No. 7. Golden Water-Pen. Produces clear, golden letters, by simply dipping in water. Lasts for months. Unsusceptible for card writing.

The above seven articles are shown in cuts, and will be given gratis to all who send for 25 cents. At retail they would cost \$1. We make this reduction to obtain new names for our Full Catalogue. Postage stamps taken same as cash. Address,

Eureka Trick and Novelty Co.,
P.O. Box 4614. 39 Ann St., N. Y.

This advertisement will not appear again.

CO-OPERATIVE
Nursery & Fruit Company,

— OF —

LOS ANGELES COUNTY.

THOS. A. GAREY, Pres't & Business Manager.

Capital Stock, \$250,000—All Subscribed.

210 acres of land in Orchard and Nursery. 500,000 Orange and Lemon Trees now ready for market of the best and thoroughly tested varieties, including

GAREY'S MEDITERRANEAN SWEET ORANGE

And

GAREY'S EUREKA LEMON.

These trees are thornless, the fruit almost seedless, early and regular bearers. These varieties have been endorsed by the Southern Horticultural Society.

Garey's Lecture on Orange Culture

Sent post-paid on receipt of Five (5) Three (3) Cent stamps. No person should engage in Orange culture without first reading this Lecture, which treats on all the principal points.

Our trees are all budded on Orange roots.

PRICE CATALOGUE, containing full description of the above mentioned varieties, sent free. Address,

THOS. A. GAREY, President,

Or F. B. FANNING, Secretary, Postoffice Box 188,

Los Angeles, California.

SPRING VALE FARM,

Three Miles N. W. of San Bernardino, Cal.

Thoroughbred Berkshire and Poland China Swine. Light Brahma and Black Cochins Chickens for sale.

T. C. STARR.

THE PACIFIC LAND AND TRUST CO.

Rent Houses, Collect Rents, and Manage

Estates.

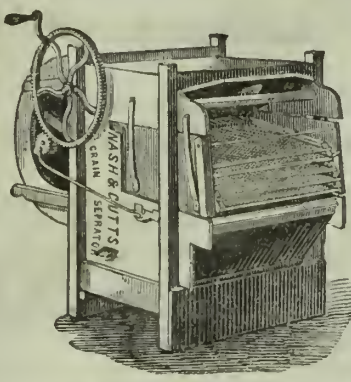
HOUSES AND LOTS FOR SALE in this City, Oakland and Alameda. Lands and ranches for sale in all parts of the country. Agents in the principal cities. Collections made throughout the Coast.

No. 534 California Street.

Agricultural Articles.

THE BEST IS THE CHEAPEST.

NASH & CUTTS' PATENT



GRAIN SEPARATOR AND FAN MILL.

THREE SIZES—Warranted to Clean from 60 to 200 bushels per hour, perfectly.

PRICES—No. 1, \$35; No. 2, \$45; No. 3, \$62.

The Nash & Cutts' Machine is the only machine that has taken the First Premium at California State Fairs in 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877.

Nash & Cutts' Machine will thoroughly separate Mustard Seed, Cheat, Barley, Oats, Cracked Wheat, etc., from Wheat in a rapid and satisfactory manner.

No zinc sieves used in the Nash & Cutts' Grain Separator and Fan Mill; therefore we can

Clean Faster, Better, and with Less Work and Trouble.

Than any other machine now in use.

The Nash & Cutts' Machine is the only one that will clean Alfalfa Seed. All we ask of any one in want of a Grain Separator is to give the Nash & Cutts'.

EVERY MACHINE FULLY WARRANTED.

The Nash & Cutts' Machine is for sale by all Agricultural Implement Dealers in California.

For further particulars address

NASH & KLEES,

No. 264 K Street, Sacramento, Cal.

Only manufacturers of the Nash & Cutts' Grain Separator for the Pacific Coast.

BAKER & HAMILTON, Sole Agents,
San Francisco and Sacramento.

The Famous "Enterprise"

(PERKINS' PATENT
Self Regulating
WINDMILLS,

Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbitted boxes.

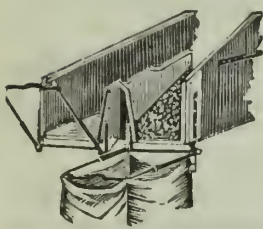
Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale, San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

To Threshers.



Hold Your Bags

Save

MONEY!!

FILL

THEM

FULL.

Shake Them Down.

HOW? USE THE

"CALIFORNIA SACKHOLDER."

Simple, Cheap,

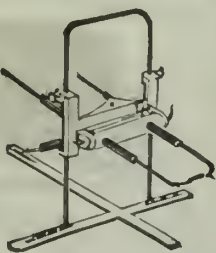
Adjustable to any
Sized Bag.

LONG,

SHORT,

WIDE,

Or Narrow.



Completest Device Ever Invented
and Lasts a Lifetime.

Discount to the trade. General Agency for the Pacific Coast,

H. M. COVERT,

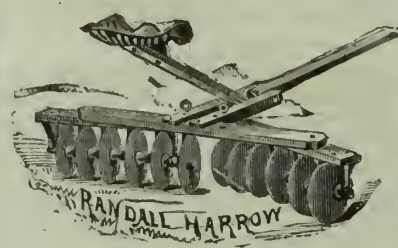
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BAKER & HAMILTON,

San Francisco and Sacramento.

The Randall Pulverizing Harrow.

A COMPLETE SUCCESS.



OVER 10,000 IN USE.

Local agents wanted. Descriptive circulars and Price list free on application.

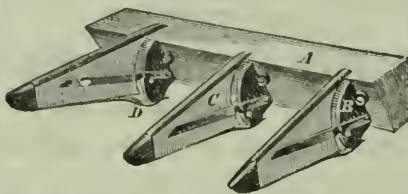
Address, CLAUDE V. BURKE,

Sole Agent.

Yolo, Yolo County, Cal

BONNEY'S PATENT

Adjustable Grain Lifter for Headers.



All farmers who wish to save grain without waste in cutting, should examine these. They can be run at any inclination to the ground, as seen at D in cut. Are light, strong and durable, and can be adjusted in 15 minutes, or removed in five when not required, by drawing bolt in malleable shank B. Set of 3 for 10-foot header, (in putting on which bore with 1/2-inch bit for lag screws) are the cheapest and give the best satisfaction of any in use. Parties can save additional cost of a set in one day's cutting, where grain is lodged or trinkles down. Price, \$40. Also, Grain Belts, Header Sticks, etc. Manufactured for BAKER & HAMILTON, San Francisco and Sacramento, Sole Agents, Pacific Coast.

MATTESON & WILLIAMSON'S



AMERICAN CHIEF

GANG PLOW.

Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

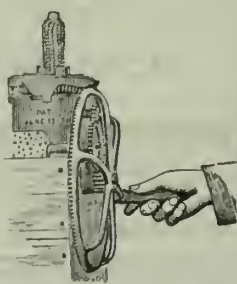
MATTESON & WILLIAMSON,
STOCKTON, CAL.

Peerless Corn Sheller.

It is so cheap (costing only \$6), that almost any one can afford to buy one. It is so rapid, it will shell almost as fast as a \$40 machine, and seven or eight bushels per hour is not above its capacity. It weighs only 13 pounds and is simple and durable. For particulars, address

WEISTER & CO.

17 New Montgomery St., S. F.



CALIFORNIA FRUIT DRIER

Awarded the

CALIFORNIA GOLD MEDAL

AND THE

U. S. Centennial Grand Medal & Diploma.

IT IS THE

BEST FRUIT DRIER,

And the only one that proves a success in making the FINEST RAISINS, FIGS, and the Choicest Fruit at the least expense.

Driers of all sizes put up and no pay asked until tested.

GEO. A. DEITZ, Manager,

SACRAMENTO, CAL.

Nurserymen.

SHINN'S NURSERIES.

NILES, ALAMEDA COUNTY, CAL.

We invite attention to our large stock of

Fruit Trees and Ornamentals,

Of the most approved varieties. Also, Coffee, Cork Oak, Olives, Guavas, English and Black Walnuts, Magnolias, Loquats, Butternuts, Small Fruits, Evergreens, Etc. We have a choice stock of the Diospyros Kaki (Japanese Persimmon), of our own growing, and also, grafted stock imported direct from several Japan Nurseries. Address for catalogue and terms,

DR. J. W. CLARK, No. 418 California St., San Francisco, Or JAMES SHINN, Niles, Alameda Co., Cal.

ESTABLISHED IN 1858.

PEPPER'S NURSERIES.

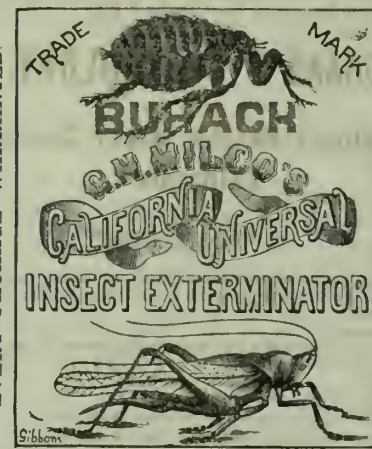
An unusually fine stock of trees is offered for sale at lowest market rates for reliable nursery stock, comprising all the leading kinds and varieties of hardy fruits. Also a general assortment of evergreen trees and shrubs, blue gums, Monterey cypress, etc., in boxes for hedge and forest planting. My trees are grown in a sandy loam, without irrigation; can be no finer rooted trees grown; wood ripens early, and can be safely transplanted as soon as sufficient rain falls for lifting the stock. Early planting recommended. Catalogues with list of prices ready for distribution October 1st.

Address, W. H. PEPPER,

Petaluma, Sonoma Co., Cal.

TREES!

To Nurserymen, Dealers and Planters: Send for the full catalogue of the BLOOMINGTON NURSERY. Established 25 years. The past season's growth has been unusually fine. WE OFFER AN IMMENSE STOCK AT LOW PRICES FOR CASH. Address W. F. BAIRD, Trustee, Bloomington, Ill.



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This is the true Pyrethrum Carneum

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As a horse medicine it is superior to any Liniment ever invented. For RINGBONE, SPAVIN, SWERNEY, CALLUS LUMPS, and all old sores, apply freely so as to blister, from three to five days in succession, and in four or five days, if not cured, repeat as at first. SPRAINS, STIFF JOINTS, BURNS, WINDGALLS, and all slight ailments, apply a small quantity so as not to blister. Saddle Sores, Cuts, and all other sores where the skin is broken, mix the liniment half and half with any kind of oil, and apply in moderation.

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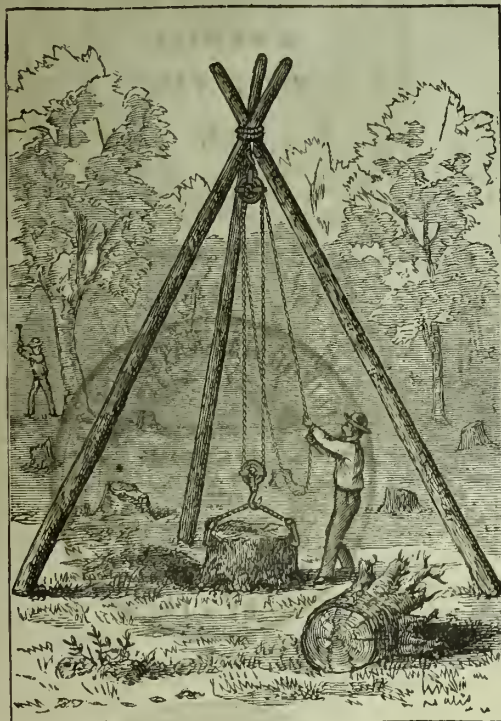
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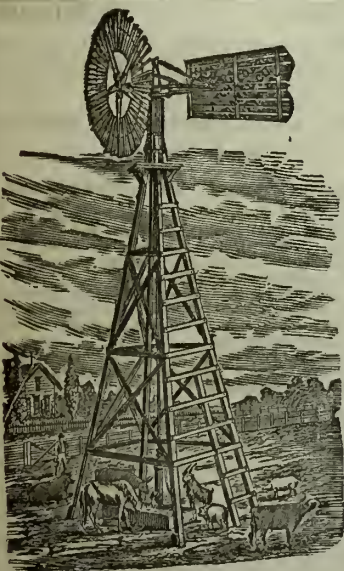
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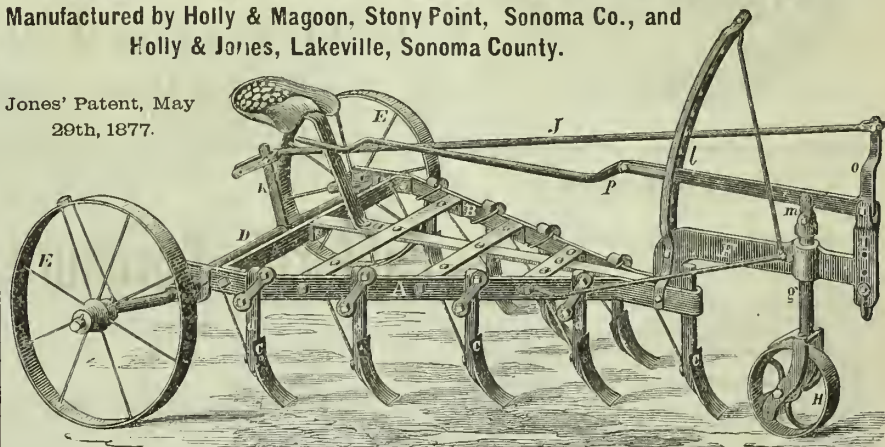
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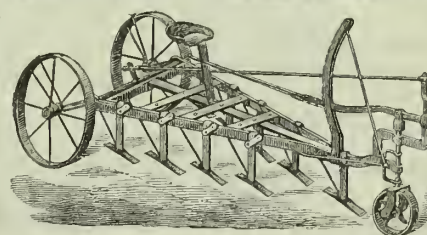


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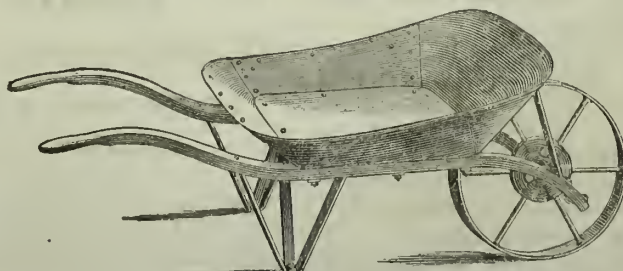
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Houses painted with it are distinguishable for years by their superior brilliancy of finish, over those painted with any other paint.

Our Wagon and Machinery Paints

From the finest Vermilion, to the more common and cheaper colors, are *specially fine*, and being ready mixed, meet the wants of the public completely. Every person owning a wagon, or any kind of machinery, should occasionally give them a fresh coat of paint. It would add to the durability and appearance of the articles a hundred times its cost.

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Comes the nearest to being *actually* Fire Proof of any Paint ever made. For *Tin Roofs* it has no equal, it being entirely impervious to air or moisture—rust or corrosion is impossible, while its use on shingle roofs not only fills up the cracks and prevents the shingles from warping, so as to preserve the roof and prevent its leaking, but its *fire proof* qualities are such, that a roof thoroughly coated with it is nearly as safe from fire as if made of *iron*. This feature, together with its *cheapness*, makes it most desirable for warehouses, bridges, *mining buildings*, and for all purposes where durability and fire proof qualities are desired.

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California Paint Company,

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Satisfactory reasons for selling will be given to prospective purchasers.

Also, if desired in connection with the above, a lumber yard on the Bay of San Francisco, having superior facilities for shipping by rail or by water, and having a large and constantly increasing business.

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On my grounds the Monarch has done splendidly. The plants are strong, vigorous and healthy. The berries large, beautiful and well flavored. From two acres planted in January last, my sales netted over freight and commission, \$1,200 in less than six months.

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J. W. BRIGGS, San Jose,

Or JOHN ROCK, Nurseryman, San Jose, California.

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SMALL FRUITS.

Our AUTUMN CATALOGUE of the above, beautifully illustrated, will be ready for distribution Sept. 1st. A copy will be mailed to all applicants. Address,

B. K. BLISS & SONS,

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100,000 Felton's Early Prolific and Reliance Raspberry.
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THOMAS' IMPROVED APPLE PARER, CORER AND SLICER.

Letters Patent No. 88,755.

This Machine is durable, easily adjusted and kept in order; does its work complete; slices the fruit of even thickness; so prepared, it dries evenly and quickly, say in 36 hours, thus avoiding a long exposure to the miller or moth producing the worms.

It does its work better and quicker than any other machine. Boys and girls can use it with great facility; many considering TWENTY BUSHELS a fair day's work, while some have pared and sliced THIRTY BUSHELS in twelve hours.

County rights for sale by

J. R. CRANDALL,

Auburn, California.

P. S.—An engraving illustrating this machine will appear soon.

Miles' Improved Tire Setter.

FARMERS AND TEAMSTERS,
Keep your Wagons in Good Order at Home by Using it.



By the use of this useful invention, you can tighten your tires in half an hour, and as easily loosen them if desirable when wet weather comes on, and thus save dishing. It also answers an admirable purpose as a Jackscrew, and costs but little more than the latter. It costs from

\$8 to \$10.

According to size. It has been fully illustrated and described in the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS.

For circulars or the purchase of the Tire Setter, address,

J. A. MILES,

Patentee and Inventor

Corner 26th and Folsom Streets, San Francisco

60 Chromo and Perfumed Cards (no 3 alike), name in Gold and Jet, 10c. CLINTON BROS., Clintonville, Ct.

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The Largest and most Complete Stock of Fruit and Ornamental Trees in the U. S. Priced Catalogues sent as follows: No. 1, Fruits, with colored plate (new edition), 15 cts.; plain, 10 cts. No. 2, Ornamental Trees, etc., with plate, 25 cts.; plain, 15 cts. No. 3, Greenhouse; No. 4, Wholesale, and No. 5, Catalogue of Roses, Free. Address—

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PACIFIC RURAL PRESS

Volume XVI.]

SAN FRANCISCO, SATURDAY, OCTOBER 5, 1878.

Number 14.

A New Grain Drill.

Now that seed time is again approaching, the description and illustration of implements which have the claim of novelty are suitable for presentation to our readers. We give on this page a trim and staunch grain drill called the "Superior," manufactured at Springfield, Illinois, and introduced to this coast by Baker & Hamilton, of San Francisco and Sacramento. This machine comes highly recommended from Eastern fields, and contains some features which won approval at the Centennial.

In the construction of the "Superior" adjustable feed drill, the object has been to produce a feeder so perfect that the change of quantity may be made with such accuracy as to secure the desired result, and at the same time preserve all the good features of an earlier pattern of a continuous distributor. The manufacturers believe they have succeeded and have entirely overcome the serious objection which has been brought against adjustable feeders, namely, lost motion in the adjusting devices and consequent irregularity in sowing the grain. With the new feeder there is continuous distribution of the seed in any desired quantity without any bunching of the seed, or clogging, or balks, or breaking of the grains. The machines are so constructed that they can be instantly changed from any one quantity to another. A simple touch of a spring does the work without the possibility of mistake or displacement from jolting or jarring of the machine, and without any lost motion.

The manner of delivering the seed is from the internal flange of the wheel. The flange serves as a bottom for the distributor, the grain resting upon it, consequently, when the wheel revolves, the seed travels exactly with it, thereby insuring the flow of grain in a steady, unbroken stream.

The casing of the wheel, together with the flange and face of the wheel and the gauge, form a complete measuring channel, or throat, through which the grain is carried by the rotary motion of the wheel. The grain resting entirely upon the flange of the wheel is thereby carried forward to the outlet in a continuous stream. The quantity sown per acre is governed by simply enlarging or diminishing the size of the opening in the measuring channel, or throat, by means of the adjustable gauge. There is nothing to cut off the flow of the seed, and as every grain of seed is under entire control of the wheel, it follows, as a natural consequence, that it must distribute the seed with accuracy and evenly.

One of the features of the drill is the "index plates" for regulating the quantity of grain and grass seed to be sown per acre. These are both located on the rear side of the grain box, where they can always be seen, and the change from

any one quantity to another be instantly made without stopping the team. The quantities of the different kinds of grain and grass seed to be sown are all plainly marked on the indicator plates, and all intermediate changes from one-half bushel of wheat to three bushels of oats, and two to 10 quarts of grass seed, can be made instantly.

The new lever hoe shifter is a great improvement over any now in use. With it the hoes can be changed from a straight line to a zigzag, and vice versa, with perfect ease, while the drill is in motion. It is provided with a patent lock bar which renders it secure and durable. It changes both ranks of hoes at the same time, moving one backward, and the other forward, thereby preserving uniformity in the length of the chains and preventing cramping of the gum tubes. There is also a surveyor or land measure which measures the land correctly, registering

SURFETTING A THISTLE.—The Australians have a thistle which they call the "variegated Scotch thistle." This we have never seen, but perhaps some reader can tell us how it compares with the large thistle which flourishes in this State and the chief points of which are its large size, bright red tufts of bloom and bright green leaves marked with white tracings. Whether it resembles the Scotch closely or not in these points, it seems to answer the Australian prescription for killing it out. It grows from seed and not from running roots like the villain from Canada; its seed is a good honest kernel and not winged like the offspring of the aforesaid reprobate. It seems that in Australia they have had large plains covered with these mighty thistles to the height of 9 or 10 feet. The mass of thistles would be dense for a time and then it would be bare as the camp ground of the traditional Arab. It seems that those who set to

Absorption of Moisture by Wheat.

Alluding to the statement made by the Stockton Independent, which we reprinted last week, to the effect that wheat stored in low piles in the Stockton warehouses would absorb more water, and hence gain in weight over that piled high, the *Alta* truly remarks that this absorption of moisture by wheat is a subject which should be definitely ascertained: It should be known: "What are the proportions of moisture in the ripe wheat in the field on the 1st of July, 1st of August, and 1st of September, and in the sack left out in the field on the first of each month, from July 1st to November 1st; in warehouses, from July 1st to March 1st? The different valleys and the warehouses built on a moist soil, or over or near water, would, of course, give different results. It has been said that our wheat gains enough in

weight, while on the way to Europe, to pay its freight. How much truth is there in the assertion?"

We should like to know these facts and any light from our readers from any weighings they may have made will be acceptable. As to the moisture in exposed grain at different intervals we doubt not Prof. Hilgard could determine it by making tests under the conditions at the university, but there might be different results in different locations. We were talking the other day with Hon. Richard McClure, of Mission San Jose, and he mentioned the loss of weight by sacks on the outside layers in field piles. His man had called his attention to the lightness of the outside sacks. In a pile of grain lying in the field 10 days, 25 sacks lying on the outer layer weighed 30 pounds less than the same number

from inside the pile. Perhaps other readers will send us in the facts of their observation so that we may allude to the subject again.

It might make quite a difference on a large crop if the style of storing were adapted to the conservation of moisture. If we should give our wheat a chance to get a good draft of aerial moisture before weighing would it be wrong? Was it wrong for that sharp Eastern farmer to give his beef cattle a good ration of salt before leaving home and then, when he had reached the village, was it wrong to let the thirsty beasts linger long at the water-trough before driving them on to the platform scales to sell by live weight? As the Afriean said, when asked by his comrade at the hen-roost whether it was wrong to steal: "Sambo, dat ar am a great moral question; no time to 'scuss dat now. Hand down dat nudder pullet."

PREMIUM LIST.—The Southern California Horticultural Society have issued their premium list in neat pocket pamphlet form. All intending exhibitors should send for it to L. C. Holt, Secretary, Los Angeles, Cal. The date of the fair is October 14th to 19th, 1878.



THE "SUPERIOR" FORCE-FEED GRAIN DRILL AND SEED SOWER.

the rods and acres sown, from 10 rods to 20 acres. It is so arranged that the operator can set it in a moment without turning the ground wheel.

There are other features in this machine which we have not space to describe, but which are worthy of the examination of those needing a seed drill. One is a "spring hoe" and a "fertilizer attachment," which can be furnished if desired and both of which contain features peculiar to this machine. Those interested in the drill can see samples at Baker & Hamilton's stores, either in this city or Sacramento, as we understand they have just received the first consignment made to this State.

WINTER PEARS.—Felix Gillet, of Nevada City, Cal., in a letter to the editor, mentions the "Beurre Clairgean" pears which he is now picking. He has specimens weighing 19 ounces, and 35 pears weighed 37 pounds. "Pound pears" are only "nubbins" nowadays.

ROUND VALLEY and Bishop Creek, Inyo, will produce 1,700 to 2,000 pounds of wheat per acre. Other crops are equally promising.

work to grub out these thistles had their labor for their pains and the thistles thrown into the bargain. But those who, knowing the nature of terrestrial lives, sowed the thistle seed very thickly over the ground, found that the first moisture germinated the seed, and the struggle for growth was so severe that all participants perished. The earth was bare of thistles as a floor. Perhaps here and there there might be seen a couple of plants intertwined, lying in each other's embrace, as hunters in the Adirondac region have found antlers of deer interlocked, showing that in some contest years ago the rivals died together. There might have been something like this in the Australian thistle field to give it an air of tragedy. But there was not. The local authority says the field was simply bare.

FAIR DATES NEXT YEAR.—We are informed that the San Joaquin county fair next year will maintain its date in the week following the State fair at Sacramento. The State fair will hold one week earlier next year and the San Joaquin society also goes ahead one week so as to follow it as usual.



CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Something of San Jose and Vicinity.

EDITORS PRESS:—Twenty years ago I had the pleasure of a visit to the then village of San Jose. At that time it contained a population of about 1,500. It has now grown to be a beautiful city of as many thousands. It would not be in conformity with the design of the present letter to dwell in detail on the manifold improvements since made. Its public buildings and educational establishments are well known. Its fine climate, after what has been so well written by Bayard Taylor and others, may be dispatched in a single couplet:

"Sweet day, so pure, so calm, so bright—
The bridal of the earth and sky."

Applicable, perhaps, to more days of the year than were ever enjoyed by any other country on the globe.

Outside of the business portion of the city, in every direction, as far as the eye can reach, it is one grand garden, plaza, park—almost hidden from view in the veriest superabundance of evergreens. These, in turn, are so interspersed with rare plants, shrubs and ornamental trees, found the world over from California to Japan; at the same time so reinforced with fruits, flowers and climbing vines as scarcely to allow a glimpse of the green grass-plot within. The coziest of cottages or some more stately mansion, with its playing fountains and every adornment suggested by the fancy or taste, give a finishing touch to the picture in the background.

But I am reminded that it is the province of the RURAL to deal rather with the useful than the beautiful. Let us then turn to some of the drier details of practical life.

Fruit Packing and Canning.

The San Jose and the Golden Gate packing companies are extensively engaged in putting up canned fruit, principally for foreign consumption, giving employment to a large number of females. There are no less than three large establishments here that give their whole attention to packing and shipping green fruits. As an instance of the amount of business done in this line, Mr. J. Britton, agent of Lusk & Co., of your city, is shipping from 2 to 3 times per month (by every steamer that goes out) from 200 to 500 boxes of green fruit, saying nothing of consignments to Australia and large supplies by rail to Nevada, Montana, as also to Chicago and other cities beyond the Rocky mountains. It is understood that no less than 80 carloads were shipped east from here last year by this firm alone. Fruit of fine flavor and of good quality is produced in various parts of the county, more particularly all along the foothills and in some portions of the mountains, but

The Willows

Adjacent to San Jose, from the nature of the soil and situation, between the Coyote and Guadalupe rivers, may be styled *par excellence* the great fruit growing section.

With the exception of strawberries and some other smaller varieties raised in such vast quantities nearer the bay, where artesian wells abound, affording an inexhaustible supply of water for irrigating purposes, no part of the county can compete with the Willows in the quantity and variety of fruits and vegetables furnished for market. Space will not permit even an enumeration, much less a description of the fine orchards and gardens to be met with here on every hand. A few special items, gathered here and there at random, may be of more interest than any general account, however full and complete.

Mode of Drying Prunes.

One Alden drier is doing much effective work. Many are drying in the sun, just as the fruit is taken from the tree, but the best method, it is thought, is to first scald the fruit in strong lye before exposing to the sun. Mr. M. Britton has 450 French prune trees, which he expects will yield each 100 pounds of dried fruit, or altogether some 20 tons. The prunes are put into a vessel with holes bored in it, and then dipped in the scalding hot water containing the alkali wash from four to five seconds. They are immediately rinsed thoroughly in pure cold water, which is very essential, as the reputation of this method of drying is said to have been already injured in some quarters from ignorance or negligence on this point. It is claimed for the mode, that one-half the time is saved in drying; a better color is given to the fruit, while it makes the skin tender and turns out an article superior in many respects for market. Mr. James Canney, by some device only known to himself, but represented to be cheap and simple, has succeeded in putting a beautiful gloss on his prunes after being dried by the above method, which gives them much of the appearance of the best class of raisins.

Yields—Ordinary and Extraordinary.

The days of high prices, when an acre or so of apricots or strawberries almost amounted to a fortune in a season, are now long numbered with the past. Yet it is stated on good authority that it has not been long since an acre of prunes or plums brought from \$400 to \$500; blackberries and strawberries as much; Bartlett pears, \$600; while the average for grapes, cher-

ries, apples, pears, peaches and fruits generally was put from \$250 to \$300 per acre. Mr. A. Boardman, in addition to much that was canned, dried or consumed by the family, sold this season at least a ton of apricots from 11 five-year-old trees for \$70. This was well, but if the old prices were still ruling, he would have realized for the same several hundred dollars.

The Linnaeus rhubarb is found growing in great abundance and luxuriance; in size almost rivaling the Mammoth, but far superior for table use, being much juicier and tenderer. It yields about \$200 to the acre.

Good Crops without a Drop of Water.

It might astonish some of your readers in the Atlantic States, although not unusual in many parts of California, to learn that excellent corn, pumpkins, and other vegetables grow well and come to maturity on this soil without irrigation or a drop of rain since planting. The statement comes from Mr. J. A. Chittenden, of the Willows, who keeps a journal (a good practice, by the way), of the state of the weather, the time of sowing, and all the transactions on the farm. He commenced planting corn on the 8th of May. His marrowfat squashes, which are nearly as large as the finest anywhere met with, were put in about a week later. His Japan persimmons set out last year are thriving well, and what is somewhat remarkable, although other cases have been reported in the PRESS, one of the young trees contained a persimmon nearly full grown. The fact in itself is of no special interest, except as a prophecy of what may hereafter be expected from the trees.

In this connection a still more wonderful case occurs, hearing on the question of prolific growth and early bearing. It is generally several years before the orange begins to bear. Mr. Wm. Steele pointed out on his place a half dozen or more yearlings, with many oranges as large as a pullet's egg. The trees were brought from Los Angeles and transplanted as late as last April.

Fruit Pests and Their Antidotes.

Grapes are in many places badly affected with mildew. The principal remedy here is the application of sulphur. Mr. J. W. Bryan, near Mountain View, finds a small insect on the vines which he looks upon as the cause of the blight; but whether viewed as the cause or the effect, it readily succumbs to the influence of the sulphur. He would be pleased to hear from some experienced vine-grower upon the subject.

Treatment for Curled Leaf.

Mr. A. C. Lawrence finds an advantage in sprinkling the tree—more particularly the leaves—with pulverized gypsum. Mr. Finch, city superintendent of schools at San Jose, saved a peach tree affected with curled leaf by digging around the roots, trampling down a large quantity of green tomato vines and afterwards pouring on plenty of water. It is likely that the potato or some other vine would have answered the purpose as well.

Scale Insects on Apple Trees.

Mr. Royal Cottle, who has one of the oldest and finest orchards in the Willows, first called my attention to a pest that was new to him or to his place at least, which further inquiry showed was by no means new or uncommon in the neighborhood. It settles upon the tree and the fruit as a scale, little larger than a fly speck. Beneath the scale is a liquid substance resembling the yellow of an egg. It leaves the body and branches of the tree greasy to the touch when rubbed by the hand, greatly damaging if not killing the tree outright and totally destroying the fruit. It will require a general concentrated and persistent effort to keep it in subjection. Mr. John Britton informed me through the columns of the RURAL that he had commenced some experiments.

It is understood that he has tried a mixture of concentrated lye and potash, thoroughly drenching the trees with a hose, and that he is thus far very favorably impressed with the result.

Mr. R. Sargent furnishes some negative testimony, which is given for what it is worth. He applied lime at the root of his trees. They have escaped, while those of his neighbors have almost invariably suffered.

A Remedy for the Scale Louse.

Mr. H. M. Hervey, who appears to have lost heavily by the so-called scale louse, after trying carbolic acid to little purpose, made free use of coal tar water and was successful after two applications, even as late as the month of March. He thinks it would have been better if the experiment had been made earlier, as coal tar is thought to be injurious to the tree, especially when in foliage.

Mr. H. furnishes another antidote which appears to have been the most successful of any yet heard of, all things taken into consideration. He trimmed and topped some of his worst infected trees in December last, applied Elaine oil (kerosene) with a brush to the body and squirted coal tar water through the branches and on the tops. The effect was marked, and decidedly successful. The remedy has also the advantage of cheapness. More anon.

A. C. K.

[By a few words which we removed from our correspondent's manuscript, we infer that he looks upon the scale insect and codling moth as identical. They are altogether different. The scale insect is always minute like a louse, and the damage is done by the immense multiplication of them. They spend their lives upon the bark of the trunk, twigs and skin of the fruit. The codling moth is a true moth or

"miller," which lays its eggs in the calyx of the blossom and the worm when hatched from the egg eats its way into the interior of the fruit, direct to the core or pit. The worm is a grub-formed creature and is half to three-quarters of an inch long. The remedies named for the scale insect are interesting. The testimony in favor of petroleum is valuable. The belief has been heretofore that it would injure the tree. There is no doubt whatever that it will destroy the insect and its eggs even when housed in its scale.—Eds. PRESS.]

Jackson's Steam Well-Borer.

EDITORS PRESS:—Considerable interest is being manifested in different parts of the State relative to artesian wells and well-boring, a short communication relative to a new invention, a steam well-borer, may not be amiss. The invention is by Mr. Jackson, 197 Main street, Stockton, Cal. The well-borer has recently been in operation on the Kidd ranch, near Stockton, penetrating to a depth of 272 feet. Owing to an accident, the work will be discontinued until fall, when it will be resumed.

Unless very accurately estimated by a competent mechanic or engineer the necessary strength of parts or the proportions of a new machine is often found insufficient, and it may be noted a failure until experience has been acquired in building and handling. With the experience gained in operating, Mr. Jackson is now hard at work improving and perfecting the well-borer.

This machine can be worked by steam, horse or man power. When run by an engine, 40 pounds of steam is used. Unlike the "hydraulic well-borer," the earth is hoisted to the top of the well at every successive depth of one foot or 20 inches, depending on the nature of the soil. The auger is worked by bevel gearing on a derrick 30 feet in height, whose base is an oblong 15 feet in length by five feet in width. At one side is a table or platform. The shaft is made of heavy hydraulic tubing with inside couplings and runs through a hollow screw. A pinion on the right drives the shaft forward, while another on the left reverses the shaft.

Gearing underneath the platform is devised to hoist and lower the shaft without revolving the shaft. Underneath the platform is also a spool on which a wire cable is wound, on one end of which are nippers.

The auger is peculiar. There is one auger with three bits on the point of the shaft. The auger doing most of the work is on a hollow tubing about 10 feet in length and fitting the shaft. At the bottom of the tubing is a ratchet nearly the same as the ratchet on the hayonet of a gun, and when the tubing is dropped from the mouth of the well, it takes its place and is secured by the forward or drive motion of the shaft; reversing the shaft releases the tube.

A hollow, cylindrical compartment or large tube, holding one foot to twenty inches of soil is fastened to the tubing encircling the shaft. A sand auger in the form of a plate with short hits is at the bottom of this case, and fastened to the tube with a valve closing with a reverse motion of the shaft. Below the short compartment or case is a bit on one side and a reamer on the other, both fastened to the tube and held in place by a shoulder and a pin. The bit cuts the bore of the well after the small three-bitted auger on the point of the shaft, and the reamer cuts a little larger for the case. Above the short case are two reamers fastened to the tubing on opposite sides, cutting the bore to the right diameter for the permanent casing. The earth cut below the short case is forced up into the case and held by its compactness. Reverse the motion of the shaft and the tubing is released, the bit and reamers closed, and the whole drawn up the surface and the case of earth emptied. The time occupied in ascending 270 feet was two minutes. The time occupied in descending the same depth (the tubing is dropped) is but 34 seconds, the whole operation being performed in two minutes and 34 seconds. It is claimed that 100 feet per day can be easily bored with this machine.

Mr. Jackson's invention is an interesting one, and a link in the chain of progress which shall finally give us an abundance of water at a cheap rate. Many are looking forward to the result with deep interest.

H. E. HALLETT.

Stockton, August 28th, 1878.

Tobacco and Teazils.

EDITORS PRESS:—At the State fair O. A. Davis, Yolo Co., presented five young tobacco plants in thrifty growth in boxes; also 20 stalks of cured tobacco. Mannel F. Manix, Newcastle, had one plant of early crop tobacco and one of late. C. S. Lowell, Sacramento, had a good display of cured tobacco. Mr. Davis informed me that tobacco is easily propagated, the climate and soil are well suited for its development, if labor could conform to the interest of the grower. He is highly satisfied with his experiment so far. Mr. Lowell of this county is also a novice, and recognizes the opening for this staple if fully carried out. It would add a new item to the profits of mixed husbandry.

His second crop of leaves will yet mature for time to cut. Manuel F. Manix, Newcastle, shows what our foothills can produce when there is energy and grit to bring forth the products when fully carried out.

Fine Teazils.

John Smith, of Smith Gardens, Sacramento, displayed a fine bunch of teazils of various sizes grown in this garden. He had half an acre under cultivation, which requires little attention to mature them, but requires some tact in keeping them trimmed in good shape for use. I asked him if it would pay to go in to it extensively. His answer was the same as in the tobacco case, i. e., the regulation of labor to conform with the cost of perfecting them for ready market. The same answer applies to the growing of cotton and tea.

GEO. RICH.

Sacramento, Cal.

THE APIARY.

Fitting out an Apiary.—No. 4.

EDITORS PRESS:—After our location is chosen the next in order comes the hives. There are to-day a great many kinds of hives; the best is cheapest, and the best is the one you like best. Perhaps a few words about the different kinds of hives would be in place here.

I use the Langstroth, for I think it the best, for several reasons. First, it has the shallowest frame, consequently the bees do not have to climb so far up when loaded, and that is an item of importance. Second, in handling the combs they are not so apt to fall out; when a comb falls out it takes five pounds of honey to replace it.

How to Make the Hive.

Use seven-eighth inch lumber, ten inches wide. Cut side boards 20 inches long—full; ends 14½ inches, take a rabbit plane and cut down one-half the thickness of the ends five-eighths, to make a seat for the frames, or make ends five-eighths narrower than their sides, and nail cleats on the outside up flush with the sides.

Cut the bottom board, two inches larger than the hive. Nail a strip on the end one inch wide to keep from warping. In front, the entrance should be left across the end full width, so that all waste material will clear out and not accumulate for moths.

Make the frame so a bee can pass all around it, allowing three-sixteenths or one-fourth of an inch space. If the frame is too large moths will bother; if too small the bees will make combs in the space so the frames will come out hard, and it makes a hiding place for the moths. If the frames are just the right size there is no danger from the moth. I never lost a swarm from the ravages of the moth in ten years' practice, nor do I take any pains other than to have every frame just right.

The Langstroth hive holds ten frames. We consider that as is near right as can be got for an apiary. There are queens that need more room for a short time during the season, but there are more that do not require so much room, so on the whole the Langstroth pattern is as near right as can well be got at. If there is more room than is required by the queen for brood, it is quickly filled with honey, and when we extract from the upper we do not disturb the brood nest all the season. Consequently frames filled with honey in the bottom are a dead thing for all summer to us, as well as the bees.

The question has been asked many times this summer why the bees swarmed so much this spring? The truth of the matter is all the combs were empty to start with and the queen had full sway, when heretofore the combs were all full of honey the queen had no room, and all bee-keepers are careless about extracting in the spring when fresh honey comes in. In spring we always extract clean so as to get a large swarm of workers ready in time. We extract, say 30 days before black sage begins to bloom. Where increase is desired it should be done earlier in the season, or as soon as the weather will permit.

Locating Hives.

Always face the hives to the east, or so the sun will strike them as early as possible in the morning, for one hour then is worth two after noon. I place my hives on stakes about 6 or 8 inches from the ground for two reasons. First, they do not get wet or muddy when it rains in winter; second, they are not so apt to melt down during extreme hot weather. I made an experiment in 1876. I had one half my hives on stakes, the rest on the ground. Three that were on the ground melted down, but none that were set up. Last summer one apiary of 73 stands all melted down but three in one day, and all were lost entirely but the three. The entrance was very small at the time, which helped to do the mischief.

Let the front end of the hive be two inches lower than the back, so the refuse from the brood will naturally work out as the bees work out and in, for there is waste to their work as well as ours.

The distance between hives should be at least eight feet, and when it is convenient 10 feet is better. All hives in an apiary are apt to look a like, and for that reason young queens as they fly out on their wedding tour are apt to

get in the wrong hive and are killed very quickly. At such a time there are no eggs to raise another queen from, consequently if not attracted to the hive will naturally dwindle down to a few bees, and moths take bold of them, or a fertile worker begins to lay eggs that produce drones, which is as bad as the moth. I never knew the moth to take a good swarm with a good queen. When I hear a man say that the moth took his bees I calculate it is neglect that took them and not the moth. There is no swarm but what has moth to a certain extent, but if kept in a proper condition the bees catch them sooner or later, and out they go.

Now the question will naturally be asked how do they get in the hives? I have seen the moths in the strongest swarms in the apiary. They are so quick that a bee cannot always catch them and their eggs so small they can hardly be seen with the naked eye. The eggs are laid in the fall for the following spring, and are sealed up with the brood. They hatch before the brood and the maggots eat their roads over the brood and under the caps, thereby killing the young bees; but as soon as the surrounding brood hatches, the bees, just in the kindest manner possible, help the insect outside; sometimes dead, sometimes alive. Outside the hive he has another enemy in the feathered tribes. I do not know its name, but it visits all the hives in the morning, picking up all such fellows as his bees cast out during the night.

B. W. KENNY.

Scenega, Ventura Co., Cal.

ARBORICULTURE.

The Atlantic and Pacific Forests.—No. 5.

[By PROF. ASA GRAY.]

The difference in the composition of the Atlantic and Pacific forests is not less marked than that of the climate and geographical configuration to which the two are respectively adapted.

With some very notable exceptions, the forests of the whole northern hemisphere in the temperate zone (those that we are concerned with) are mainly made up of the same or similar kinds. Not of the same species; for rarely do identical trees occur in any two or more widely separated regions. But all round the world in our zone, the woods contain pines and firs and larches, cypresses and junipers, oaks and birches, willows and poplars, maples and ashes and the like. Yet with all these family likenesses throughout, each region has some peculiar features, some trees by which the country may at once be distinguished.

Beginning by a comparison of our Pacific with our Atlantic forest, I need not take the time to enumerate the trees of the latter, as we all may be supposed to know them, and many of the genera will have to be mentioned in drawing the contrast to which I invite your attention. In this you will be impressed most of all, I think, with the fact that the greater part of our familiar trees are "conspicuous by their absence" from the Pacific forest.

For example, it has no magnolias, no tulip tree, no papaw, no linden or basswood, and is very poor in maples; no locust trees—neither flowering locust nor honey locust—nor any leguminous tree; no cherry large enough for a timber tree, like our wild black cherry; no gum trees (Nyssa nor Liquidambar), nor sorrel tree, nor kalmia; no persimmon, or bumelia; not a holly; only one ash that may be called a timber tree; no catalpa, or sassafras; not a single elm, nor hackberry; not a mulberry, nor planer tree, nor maclura; not a hickory, nor a beech, not a true chestnut, nor a hornbeam; barely one birch tree, and that only far north, where the differences are less striking. But as to coniferous trees, the only missing type is our bald cypress, the so-called cypress of our Southern swamps, and that deficiency is made up by other things. But as to ordinary trees, if you ask what takes the place in Oregon and California of all these missing kinds, which are familiar on our side of the continent, I must answer, nothing, or nearly nothing. There is the madrona (arbutus) instead of our kalmia (both really trees in some places); and there is the California laurel instead of our Southern red bay tree. Nor in any of the genera common to the two does the Pacific forest equal the Atlantic in species. It has not half as many maples, nor ashes, nor poplars, nor walnuts, nor birches, and those it has are of smaller size and inferior quality; it has not half as many oaks; and these and the ashes are of so inferior economical value, that (as we are told) a passable wagon wheel cannot be made of California wood, nor a really good one in Oregon.

This poverty of the Western forest in species and types may be exhibited graphically, in a way which cannot fail to strike the eye more impressively than when we say that, whereas the Atlantic forest is composed of 66 genera and 155 species, the Pacific forest has only 31 genera and 78 species.* In the appended diagrams, the short side of the rectangle is proportional to the number of genera, the long side to the number of species.

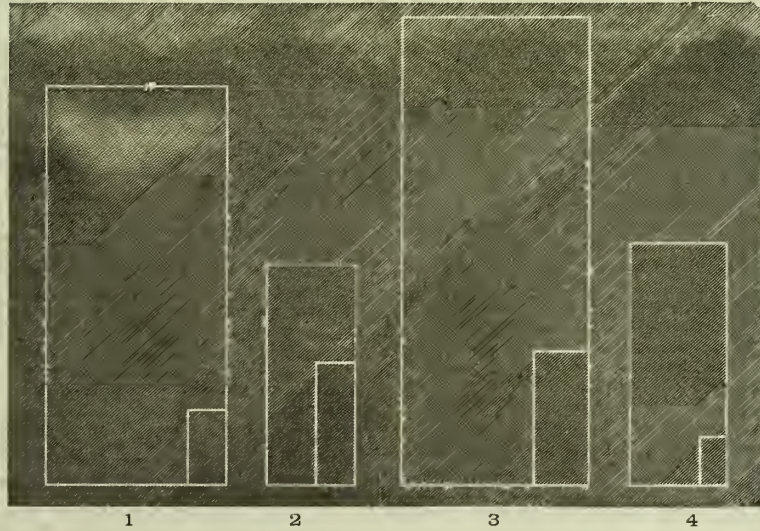
*We take in only timber trees, or such as attain in the most favorable localities to a size which gives them a clear title to the arboreal rank. The sub-tropical southern extremity and Keys of Florida are excluded. So also are one or two trees of the Arizonian region which may touch the evanescent southern borders of the Californian forest. In counting the coniferous genera, pinus, larix, picea, abies and tsuga are admitted to this rank, but cupressus and chamaecyparis are taken as one genus.

Now the geographical areas of the two forests are not very different. From the Gulf of Mexico to the Gulf of St. Lawrence about 20° of latitude intervene. From the southern end of California to the peninsula of Alaska there are 28°, and the forest on the coast runs some degrees north of this; the length may therefore make up for the comparative narrowness of the Pacific forest region. How can so meager a forest make so imposing a show? Surely not by the great number and size of its individuals, so far as deciduous (or more correctly non-coniferous) trees are concerned; for on the whole they are inferior to their Eastern brethren in size if not in number of individuals. The reason is, that a larger proportion of the genera and species are coniferous trees; and these, being evergreen (except the larches), of aspiring port and eminently gregarious habit, usually dominate where they occur. While the East has almost three times as many genera, and four times as many species of non-coniferous trees as the West, it has slightly fewer genera and almost one-half fewer species of coniferous trees than the West. That is, the Atlantic coniferous forest is represented by 11 genera and 25 species; the Pacific by 12 genera and 44 species. This relative preponderance may also be expressed by the diagrams, in which the smaller enclosed rectangles, drawn on the same scale, represent the coniferous portions of these forests.

Indeed, the Pacific forest is made up of conifers, with non-coniferous trees as occasional undergrowth or as scattered individuals, and conspicuous only in valleys or in the sparse tree-growth of plains, on which the oaks at most reproduce the features of the "oak openings" here and there bordering the Mississippi prairie region. Perhaps the most striking contrast between the West and the East, along the latitude usually traversed, is that between the spiry evergreens which the traveler leaves when he quits California, and the familiar woods of various-hued round-headed trees which give

contains twice as many genera and about twice as many species of indigenous trees as are possessed by all Europe; and as to coniferous trees, the former has more genera than the latter has species, and over twice and a half as many species.

The only question about the relation of these four forest regions, as to their component species, which we can here pause to answer, is to what extent they contain trees of identical species. If we took the shrubs, there would be a small number, if the herbs a very considerable number, of species common to the two new world and to the two old world areas respectively, at least to their northern portions, even after excluding arctic-alpine plants. The same may be said, in its degree, of the North European flora compared with the Atlantic North American, of the Northeast Asiatic compared with the northern part of the Pacific North American, and also in a peculiar way (which I have formerly pointed out and shall have soon to mention) of the Northeastern Asiatic flora in its relations to the Atlantic North American. But as to the forest trees, there is very little community of species. Yet this is not absolutely wanting. The red cedar (*Juniperus virginiana*) among coniferous trees, and *Populus tremuloides* among the deciduous, extend across the American continent specifically unchanged, though hardly developed as forest trees on the Pacific side. There are probably, but not certainly, one or two instances on the northern verge of these two forests. There are as many in which Eastern and Western species are suggestively similar. The hemlock-spruce of the Northern Atlantic States, and the yew of Florida are extremely like corresponding trees of the Pacific forest; indeed the yew trees of all four regions may come to be regarded as forms of one polymorphous species. The white birch of Europe and that of Canada and New England are in similar case; and so is common chestnut (in America confined to the Atlantic States), which on the other side of the



1. European Forest. 2. Japan-Manchurian Forest. 3. Pacific American Forest. 4. Atlantic American Forest. DIAGRAMS SHOWING COMPARATIVE NUMBER OF SPECIES AND GENERA IN DIFFERENT FORESTS.

him the feeling of home when he reaches the Mississippi. The Atlantic forest is particularly rich in these, and is not meager in coniferous trees. All the glory of the Pacific forest is in its coniferous trees; its desperate poverty in other trees appears in the annexed diagram.

The diagrams on this page are made more instructive, and the relative richness of the forests round the world in our latitude is most simply exhibited, by adding two or three similar ones. Two will serve, one for Europe, the other for Northeastern Asia. A third would be the Himalay-Altaian region, geographically intermediate between the other two as the Arizona-Rocky mountain district is between our Eastern and Western. Both are here left out of view, partly for the same, partly for special reasons pertaining to each, which I must not stop to explain. These four marked specimens will simply and clearly exhibit the general facts.

Keeping as nearly as possible to the same scale, we may count the indigenous forest trees of all Europe at 33 genera and 85 species. And those of the Japan-Manchurian region, of very much smaller geographical area, at 66 genera and 168 species. I here include in it only Japan, Eastern Manchuria, and the adjacent borders of China. The known species of trees must be rather roughly determined; but the numbers here given are not exaggerated, and are much more likely to be sensibly increased by further knowledge than are those of any of the other regions. Properly to estimate the surpassing richness of this Japan-Manchurian forest, the comparative smallness of geographical area must come in as an important consideration.

To complete the view, let it be noted that the division of these forests into coniferous and non-coniferous is, for the

European non-coniferous.....	26 genera,	68 species.
coniferous.....	7 "	17 "
Japan-Manchurian non-coniferous.....	33 "	85 "
coniferous.....	47 "	123 "
coniferous.....	19 "	45 "
	66 "	168 "

In other words, a narrow region in Eastern Asia

world is also represented in Japan. A link in the other direction is seen in one spruce tree (called in Oregon Menzies spruce) which inhabits Northeast Asia, while a peculiar form of it represents the species in the Rocky mountains.

[To be Continued.]

THE VINEYARD.

Grapes Syrup and Grapes.

EDITORS PRESS:—As there seems to be a general desire among grape men for information about the *modus operandi* of making grape syrup, I bethought me to interview our enterprising citizen John Weinberger, who has had more experience than any one in Napa valley, and report through the RURAL PRESS for the benefit of all interested. A full account of Mr. Weinberger's mode of manufacture was published in the RURAL PRESS, I think some time in Nov., 1876; Mr. Weinberger informs me there has been nothing new developed since then. He uses Cook's evaporator. Last year he made about 2,000 gallons for which he found a ready home market, with an increasing demand in Lake county and a few orders from San Francisco. The thickening or candying of the syrup has not as yet been overcome. This condition is preferred by a great many; those that do not like it thus, can bring it back to its original condition by placing the vessel containing it, into another of boiling water and letting remain on the stove a few minutes. It will then remain in the semi-fluid condition as long or longer than before.

The Mission grape is generally used for syrup-making, as it contains a larger percentage of saccharine matter than any other; but a little has been made from other varieties by way of experiment, and it has been found that some of the foreign varieties make a far superior article to the Mission. That made

from the Muscat of Alexandria is pronounced by some to be delicious. Your correspondent has not had the opportunity of testing it as yet, but expects to soon, and will then report with sample to the RURAL PRESS for the benefit of all interested. The Mission syrup is retailed in St Helena at 75 cts. per gallon or \$1 in gallon tin pails.

Our Grape Growers

Are getting \$18 per ton for Black Malvesia and \$20 for Muscats and other fine varieties. Mission grapes I believe only bring \$12. Owing to the increasing demand for California wines, the cellars in Napa valley are about empty, which makes a good market this year for grapes. Some vineyards that were not properly sulphured, are suffering with mildew, but upon the whole, we have a remunerative crop this year.

Other Fruits.

Our orchards are literally breaking down with their precious burdens of fruit. Apples are especially abundant and of good quality and to be had almost for the gathering.

The Hop Crop

Has nearly all been gathered and is satisfactory both as to yield and quality; the price offered however, is not so encouraging, but the price for the new crop is rather more satisfactory than for a year or two past.

JNO. MAVITY.

St Helena, Sept. 24th, 1878.

THE STABLE.

The Equestrian Tournament.

One of the exercises which attracted much attention at the late State fair was the ladies' riding contest. There were ten handsome premiums donated by dealers in silverware and other desirable goods, and the society prize of plate valued at \$75. The contest was in charge of Director Daniel Flint and Captain B. S. Harris. The account of the competitors and the results is given by the *Record-Union* as follows:

The entries were Miss Sara M. Burns, Sacramento, riding a brown horse, and wearing a dark cloth riding habit, black hat and blue band. Miss Ella Mouton, Sacramento, riding a black horse, and wearing a dark cloth habit, black straw hat and white plume. Miss Hattie Sims, Sacramento, riding a bay pony, and wearing a dark habit and straw hat, distinguishing ribbon color red. Mrs. Pauline Schwartz, Sacramento, riding a sorrel horse, and wearing a dark habit, black velvet cap and black feather. Mrs. L. G. Joran, Sacramento, riding a dun horse, and wearing a black habit, black straw hat and red and black plume. Miss Mary Best, Sacramento, riding a bay mare, and wearing a black habit, beaver hat and black plume. Mrs. Nellie Webster, Sacramento, riding a gray horse, and wearing a navy-blue cloth habit, black velvet hat and plume. Miss Kate Cross, Woodland, riding a white horse, and wearing a black habit and silver lace, silk hat and blue veil. Mrs. May Stevens Billings, Sacramento, riding a gray horse, and wearing a navy-blue habit and silk jockey cap. Mrs. M. Stevens, Sacramento, riding a chestnut bay horse, and wearing a black habit, silk jockey cap and black veil. Miss Nellie M. Shepherd, Sacramento, riding a brown pony, and wearing a black habit, black velvet jockey cap, blue ribbons, for distinguishing color.

At 10:30 A. M. the quarter stretch was cleared and the ladies who were to compete rode upon the course. Captain Harris, mounted on the Chief Marshal's fine horse, escorted the ladies to position, and with excellent judgment directed the order of their parading. The cavalcade first walked the stretch in double file, then went at a canter, and then at a gallop. Then each rider went singly at an amble. Then followed a canter in line, and then speeding down the stretch. These evolutions were frequently received with applause, which at times broke into enthusiastic applause, and several of the ladies were greeted by clapping of thousands of hands as they rode by. At the conclusion, despite orders to the contrary, eight of the contestants started for a race about the track, Miss Mouton, Miss Cross and Mrs. Stevens leading and outrunning the Marshals, who pursued them on less fleet animals than the ladies rode. The recall tap of the judges' bell seemed to stop Mrs. Stevens, but Misses Mouton and Cross continued around the course, playing the lash to their horses vigorously, and made the mile in good time, amid the cheers and shouts of the spectators, which rose to a roar of applause as they came to the score, Miss Mouton leading by two lengths of her horse. During the quarter-stretch speeding, Mrs. Stevens was thrown, but soon remounted and was apparently unhurt by her severe fall. The judges balloted for award of prizes, with the following result: First choice for prizes, Miss Cross; second, Mrs. Billings; third, Miss Mouton; fourth, Miss Shepherd; fifth, Mrs. Stevens; sixth, Miss Burns; seventh, Miss Sims; eighth, Mrs. Schwartz; ninth, Miss Webster; tenth, Mrs. Joran; eleventh, Miss Best. The judges were Daniel Flint, Sacramento; N. Moritz, Oakland; G. W. Trahern, Stockton; Hon. John Boggs, Colusa; C. F. Reed, Yolo; Hon. H. F. Page, Placerville; Dr. Glenn, Colusa.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Birthday of Alhambra Grange.

EDITORS PRESS:—Alhambra Grange has had a veritable birthday; her real natal day was not on our chosen Saturday, though our members voted that we play the third Saturday of the month her birthday, that day being our regular meeting, and also set apart for the children, it seemed the most fitting time to leave all care and go rejoicing.

This third Saturday was one of September's loveliest, and a fitting time-gem to be sacredly placed in the treasury of Alhambra's bright memorial days. Old Sol's summer breath kissed the dancing waves of Carquinez foam-crested bed, and smiled back upon our hills and village with that bright, lustrous haziness peculiar, I believe, to our California climate.

In our younger days, by the way, a long time ago, one stereotyped line in our old-fashioned quill-written copy-books was "Time and tide wait for no man," but in this advanced day of earthly school-life we find that mouth-piece of steam, the railroad engine, waits for no man—hence if we catch the local train we must be up with the day-god, catch the first train of light, and like the busy bee use well every shining moment, or laggards we would be in the hive of Grangers that this day would gather sweets from picnic moments.

Quarter to eight found amid the throng at our Martinez depot a people who might be known as Grangers by their lunch baskets, hiding the time of the snorting iron horse which was to take us to Verona, a near station, where we were to forget all practical duties and pleasantly revel in the name of Alhambra Patrons of Husbandry. Our roll-call was not complete, but I must note the presence of one matron who had, with the help of a comparatively raw celestial, breakfasted a crew of nineteen thrashers, besides her own family of five or six, and came, too, laden with her share of the good things. Could our old-time grandmothers have done more than this?

A special car was set apart to those pleasuring patrons, and in ten minutes the hills of Verona resounded with the merry voices of children in chorus with older voices who were playing once more the serious game of childhood. Lunch baskets were safely stowed under the friendly arms of an old oak tree, and soon were scattered as far as the eye could reach along the railroad track, which fringes the water's edge, these old and young children in all the childish abandon of the gayest merry-makers. By eleven o'clock into camp came merry sun-burnt groups, loaded with shells, pebbles, seaweeds and mosses, finding that a good, worthy matron had made a fragrant coffee treat; a few moments more, as if by magic, another matron set before us a steaming tea-pot, and early as it was justice was done these welcome ever-ages, and also to the multitude of good things that came from those baskets that marked the Granger at the depot.

Our table was not cleared, good housekeeper, nor the dishes washed, but all securely covered, and again all left to fill that cup of pleasure which, strange contradiction of terms, runneth over, and yet is never full. This time we took by storm a seaside farmhouse, and to them we are indebted to the crowning pleasure of the day. For a short time we listened to the music of a fine Steinway, after which the sturdy son of this Edward's house divided our band into two parties, giving all a boat ride, a good taste of a "life on the ocean wave." We were very near our Brothers Deming, of Vallejo, and looked with long longing eyes towards their pleasant Grange home; acknowledged and returned in handkerchief waving a whistling salutation of a steam thrasher near the shore. Returning to camp we found the beautiful yacht, the *Pearl*, anchored against us, and its owner, Capt. Eckley and family, making a pleasant informal call upon our picnic family.

The afternoon sun warmed us that this ever restless, tireless horse, whose iron tread wakes the sleeping echoes of the California cañons fringing our Pacific board, would soon come on his westward tramp and we must away. Seven minutes and we are at the Martinez depot, each testifying to a living, pleasing remembrance of the fourth birthday of Alhambra Grange.

MRS. MARIA B. LANDER,
Sec. Alhambra Grange.

Martinez, Sept. 29th, 1878.

Meeting of the State Grange.

As we write the Stato Grange is in session at Sacramento. We hope next week to have some account of the proceedings. The *Call* has the following telegraphic gossip about the meeting: "SACRAMENTO, Oct. 1.—The sixth annual session of the State Grange Patrons of Husbandry began here to-day. All the grand officers but two are present and about 100 delegates. Some 223 Granges are entitled to be represented. An order of business was adopted, hours of daily session agreed upon and the days of the week laid out for special work, Wednesday, Thurs-

day and Saturday. Nights are to be devoted to discussions on the good of the Order and consideration of the proposed amendments to the Constitution of California. To-night the session was wholly given up to private work and an informal debate on taxation and desired changes in the State Constitution. The Grange works with closed floors. To-morrow it will get down to practical work, and all reports of officers will be submitted and referred. On Friday night the fifth degree is to be conferred, and the Feast of Pomona celebrated."

THE attention of stockholders should be given to the notice of the meeting of shareholders of the Grangers' Bank of California, which is to be held on Tuesday, October 8th. A full attendance should be had.

The Charm of an Open Fire.

One of the charms of indoor life in California is the open fire. Here there is no need for the torrid base burners with glaring isinglass and unhealthy generation of gas, which are essential for economical and thorough heating of habitations in the frozen East. Here we may have what all the poets have described as beautiful and all the doctors have pronounced most healthful, viz: an open fire, with tasteful mantel and glowing grate. In an instant the flames may be sent leaping up the chimney, and a gentle warmth, all that our genial winter requires, will radiate throughout the home. There has been great progress made of late in the building of mantels and grates, and one of the chief points in this progress is the marbled mantel. To us it is very beautiful. It gives the grain and coloring of the most handsome and rare marbles at nearly the price of the commonest stone. It is a more satisfactory mantel to use, because it is in one piece and does not admit of the gaps and openings between the sections which are too common in stone mantels. As it does not admit of these it is also safer, for there is no chance for the fire to find any joints in its armor through which to penetrate and fire the building. There are other points of advantage which need not be enumerated. One had only to examine the splendid exhibit of marbled mantels made by Messrs. W. W. Montague & Co., of Nos. 110, 112 and 114 Battery street, at the Mechanics Fair to be won to an approval of them. This firm has now the exclusive trade in these mantels in San Francisco, and they manage their business with enterprise and fairness. Every one who contemplates building should by all means give the marbled iron mantels a thorough examination before selecting the fittings for his fire place.

STATE FAIR PREMIUM LIST.—We doubt not there has been some dissatisfaction at the form in which the State fair premium list has been printed this year. The Sacramento papers which have usually printed the list in full giving the name of the article for which the premium was awarded in connection with the name of the exhibitor, this year, in many of the classes, merely grouped the names of the prize takers and omitted the articles for which each exhibitor secured the award. This was the only form in which the list was accessible to us in time for the week's paper, and we printed it as the best list we could get. Of course the Sacramento papers must be their own judges of what they shall print and what omit, but we think their action this year was mistaken. By the way in which the names were grouped they were wholly without significance. We notice that the *Record-Union* justifies its course in part, by saying the premiums of the Mechanics' Institute fair were not published this year. There were no premiums offered except for floral displays and these were published in all the city papers which we noticed.

PICKING HOPS BY MACHINERY.—An ingeniously devised labor-saving hop-picking machine has been invented by a Waterville, N. Y., man. The following description is given of it: It consists of two rubber rollers, so constructed as to draw in the branch, while two steel rollers, having an opposite action, pick the hops from it. The machine is about the size of an ordinary clothes-wringer, is propelled by means of a treadle, and runs as easy as a light sewing machine. From the picker the hops run into a sack, which, when filled, is taken to the separator, which sorts the hops from all leaves or stems which may have gone into the sack, and thence to the hop house. It is estimated to pick from 20 to 30 boxes per day, and one separator is ample for a large number of machines. It is stated that the separator is not yet perfected, but works with moderate satisfaction.

LAND claimants often need the advice and assistance of skilled land lawyers, and those who have held places in the United States Land office have had the best possible training for forwarding the interests of their claimants. The card of McFarland & Farr in our advertising columns may be of value to many of our readers.

The Fairs.

The fairs go on. They all seem to be attaining a good measure of success this year and the people are enjoying the days of sunshine on the grounds, and throngs of sight seers in the pavilions. Our space does not permit prolonged accounts of the different exhibitions. The best thing we can do is to print the official premium lists, and we doubt not these will be carefully consulted by those who are in search of excellence in the different lines exhibited. For the premium list of the Sonoma and Marin fair, we are indebted to the *Petaluma Argus*; for the Stockton fair to the *Independent*, and for the Contra Costa fair, to the *Martinez Gazette*.

Sonoma and Marin District Premium List.

Horses

Thoroughbred Horses.—G. H. White, stallion 4 yrs old, Ironwood, dip and \$20. Mr. Griesby, stallion 3 yrs old, David Achinson, \$15. J. B. Chase, stallion 2 yrs old, Warwick, \$12. Robert Crane, stallion 1 yr old, Wheatley, Jr., \$8. E. Denman, mare 4 yrs old, Demoret, \$15. J. B. Chase, mare 3 yrs old, Folly, \$12. J. H. McNabb, mare 1 yr old, Avis, \$6. E. Denman, suckling horse colt, Prince, \$5.

Graded Horses.—John Pfau, stallion 4 yrs old, Eureka, dip and \$15. B. E. Harris, stallion 3 yrs old, Excellence, \$12. U. P. Quackenbush, stallion 2 yrs old, Bayswater, \$8. Robert Seavy, stallion 1 yr old, Billy Harris, \$6. Wm. Bihler, mare 4 yrs old, Molly, \$12. James Higgins, mare 3 yrs old, Kitty Watson, \$9. Peter Lawler, mare 2 yrs old, Flora, \$7. Lewis Faught, mare 1 yr old, Belle, \$6. Robert Crane, suckling horse colt, Wade Hampton, \$5. E. J. Fowler, suckling mare colt, Molly D., \$5. John Pfau, stallion and six colts, Eureka, \$20.

Horses of all Work.—Wm. Bihler, stallion 4 yrs old, Gray McClellan, dip and \$15. C. C. Champlin, stallion 3 yrs old, Tiger Whip, \$12. Bayard Slusser, stallion 2 yrs old, Mark West, \$8. John Pfau, stallion 1 yr old, Ingraham, \$6. T. M. Chapman, mare 4 yrs old, Kate, \$12. T. Robinson, mare 3 yrs old, Fannie Morgan, \$9. W. D. Bliss, mare 2 yrs old, Maggie, \$7. Page Bros., mare 1 yr old, Natta, \$6. H. D. Gilbert, suckling horse colt, Captain, \$5. Robert Crane, suckling mare colt, Betty, \$5. Joel Merchant, stallion and six colts, Geo. M. Patchen, Jr., \$20.

Draft Horses.—Hill & Co., stallion 4 yrs old, Duke de Chaires, dip and \$15. Theodore Skillman, stallion 3 yrs old, Tornado, \$12. 2 yrs old, Duke, \$8. T. M. Chapman, stallion 1 yr old, Pedro, \$6. David Stewart, mare 4 yrs old, Belle, \$12. A. Pharris, mare 3 yrs old, Lucy, \$9. H. Mechem, mare 2 yrs old, Susie, \$7. W. Dahney, mare 1 yr old, Nellie, \$6. J. A. Payton, suckling horse colt, Sultan, Jr., \$5. Page Bros., suckling mare colt, Duchess, \$5. Hill & Co., stallion and six colts Duke de Chaires, \$20.

Roadsters.—Fuller & Hopkins, stallion 4 yrs old, Edwin Booth, dip and \$15. E. Moore, stallion 3 yrs old, Copperhead, \$12. Richard Crane, stallion 2 yrs old, Silas Booth, \$8. S. H. Torrence, stallion 1 yr old, Col. Torrence, \$6. George Faith, mare 4 yrs old, Nellie McClellan, \$12. David Stewart, mare 3 yrs old, Annie, \$9. S. H. Torrence, mare 2 yrs old, Alexandria, \$7. John Pfau, colt 1 yr old sired by a roadster stallion, Lizzie Ingraham, \$6. George Faith, stallion and six colts, General McClellan, \$20. P. Perry, suckling mare colt, Mary.

Carriage and Saddle Horses.—O. F. Westover, matched carriage team, Minnie Mac and Lady Mac, \$15. Ben. E. Harris, single buggy horse, Rocket, \$7. J. J. Lowery, saddle horse, Gil, \$5.

Thoroughbred Cattle.

P. J. Shafter, Durham bull, 4 yrs old, Star Duke, \$20. Page Bros., Durham bull, 2 yrs old, El Medico, \$10; Durham bull, 1 yr old, Kirkingham, \$8. J. B. Redmond, Durham bull calf, Little Pet, \$5. Page Bros., Durham cow, 4 yrs old, Nomi Richardson, \$5. J. B. Redmond, Durham heifer, 1 yr old, Trueheart, \$5. P. J. Shafter, Alderney bull, 4 yrs old, Surprise, \$20. Wm. Sexton, Alderney bull, 1 yr old, Young Keystone, \$8. Frank Mechem, Devon bull, 4 yrs old, Dick, \$20. P. J. Shafter, Alderney cow, 4 yrs old, Roman, \$15. J. R. Rose, Devon cow, 4 yrs old, Fairy, \$15; Devon bull, 1 yr old, Pedro, \$10; P. J. Shafter, Alderney cow, 3 yrs old, Lady Blanche, \$10. J. R. Rose, Devon cow, 3 yrs old Ruby, \$10; Devon cow, 2 yrs old, Polly, \$8; Devon cow, 1 yr old, Cherry, \$5. P. J. Shafter, Alderney cow, 2 yrs old Olema, \$8. A. Higgins, Ayrshire bull, 4 yrs old, Major Wentworth, \$20. J. B. Lewis, Ayrshire bull, 3 yrs old Gen. Fremont, \$15. E. R. Charles, Ayrshire bull, 2 yrs old, Billy Carr, \$16. A. Higgins, Ayrshire cow, 4 yrs old, Kitty Clyde, \$15; Ayrshire heifer, Dolly Varden, \$5; Ayrshire calf, Duke, \$5.

Grade Stock

R. Harris, bull 4 yrs old or over, Jlm, \$15. Allie Hill, cow 4 yrs old or over, Rosey \$10. Page Bros., cow 3 yrs old, Mamie, \$8; heifer 1 yr old, Miss Mullally, \$4; heifer calf, Jennie, \$3.

Sheep.

Page Bros.—Five French Merino ewes; Spanish ram; Wm. Hill, 5 Spanish ewes; R. H. Crane, Southdown ram, Prince; Page Bros., 5 French Merino ewe lambs; 5 ram lambs; R. Crane, 5 ewe lambs.

Grade Sheep.—Page Bros., ram; 5 ram lambs; R. Crane, 5 ewe lambs.

Goats.

S. A. Rendall—Angora goat; 3 Angora does; Angora kids.

Swine.

George Campbell—Berkshire hoar; G. P. Baxter, Berkshire sow with 5 pigs; George Campbell, 5 pigs of any breed.

Grade Swine.—G. D. Green, boar and sow; R. Crane, 5 pigs, under 6 mos; G. D. Green, finest and fattest hog.

Pure Bred Poultry.

R. Crane—Light Brahmas; Morris Bros., Dark Brahmas, Allie Hill, Buff Cochins; R. Crane, White Cochins; Morris Bros., Black Cochins, Partridge Cochins, Silver-Spangled Hamburgs, Black Spanish, White Spanish; Jas. Laughlin, Houdans; Mrs. J. Button, Brown Leghorns; Morris Bros., White Leghorns; T. B. Cary, Game; Isadore Walker, Japanese Bantams; J. P. Rodchaver, Bronze turkeys; Morris Bros., Dominiques, Sultans, White Crested Polish; Miss N. Symonds, geese; R. Crane, ducks.

Agricultural Products.

J. C. Purvine—Australian wheat; H. Gaston, Chile wheat; L. W. Walker, best sack wheat, any other variety; E. R. Charles, barley; John Kendall, rye; H. Gaston, oats; George P. McNear, wheat flour, corn meal; R. Watt, shelled corn; John Quinn, single variety potatoes, P. Mullally, collection potatoes; L. Mechem, squashes; F. W. Lougee, pumpkins; T. M. Chapman, peas; J. P. Rodchaver, beans; W. Gibson, sugar beets, mangel wurtzels; C. D. Grover, blood beets; L. W. Walker, Rutabagas; H. H. Garland, corn on stalk; J. Gibbs, tomatoes; I. R. Jewell, hops; P. Mullally, cabbage; L. Vestal, cauliflower; Robert Crane, watermelons, cantaloupe melons, musk melons; A. Dolphino, parsnips, celery; James Loughman, garden vegetables, not less than 10 varieties.

Fruits, Grapes, Nuts, Etc.

M. Gillam—Largest collection of fruit raised in 1 orchard; D. M. Winans, apples; J. Rodchaver, best single variety apples; D. M. Winans, 6 varieties apples, 5 each; Robert Seavy, single variety pears; R. Watt, 6 varieties pears; M.

Gillam, 6 quinces; Morris Bros., collection oranges, collection lemons, collection grapes; H. Talbot, 2d best collection grapes; G. R. Coddling, peaches; Morris Bros., foreign grapes; H. Talbot, California grapes; Morris Bros., largest bunch of grapes, collection of figs; S. P. Pierce, collection almonds, collection English walnuts.

Preserved Fruits, Etc.

W. J. Hunt—Dried fruits; C. P. Hatch, dried apples, dried peaches; George Clark, dried plums; Miss Eddie Houx, dried plums, seeded; C. P. Hatch, raisins; Mrs. George W. Case, jellies, preserves, pickles; Mrs. T. McGuire, catsup.

Butter, Cheese and Bacon.

A. Woodworth—Fresh butter; George Campbell, 2d best fresh butter; David Stewart, packed butter; Lang & Haskins, cheese; Robert Glenn, 2d best cheese; Robert Crane, ham, side bacon.

Wine, Cider, Ale, Etc.

H. Weyl—Exhibit wines; N. Carriger, Port wine; H. Weyl, red wine; G. A. Goss, white wine; N. Carriger, brandy; B. F. Connolly, ale, cider, soda.

Breads, Cakes, Etc.

Mrs. A. Higgins—Wheat bread; Mrs. C. C. Chapman, Boston brown bread; Mrs. J. Button, corn bread; Mrs. Chapman, fruit cake; Mrs. A. Higgins, pound cake; Mrs. R. M. Todd, sponge cake; Mrs. Chapman, coffee cake, Miss Nettie Symonds, best assortment of tarts.

Plants, Bouquets, Etc.

Prof. Lippitt—Collection of trees, shrubs and flowering plants, fuchsias, begonias, hardy evergreen trees and shrubs, tropical fruit trees and shrubbery; Mrs. Stratton, best floral design, cut dahlias; Mrs. Chapman, vase bouquets; Mrs. H. Gilbert, bouquet dried flowers and grasses.

Shafter Premiums.

For Bread Making—Bellinda C. Wharf; soup, Florence Towne; pork and beans, Carrie M. Dutton; salad, Augusta Dohmen.

Bowen Premiums.

First Prize—Lillie R. Jones, 14 yrs old; 2d, Ella C. Yongling; 3d, Miss Emma R. Ross.

San Joaquin County Premium List.

Horses.

Thoroughbreds—Stallion, 3 yrs old, Young Prince, M. C. Flsher; mare, 3 yrs old, Black Willow, R. W. Randall; dam, with not less than 4 colts, Ellen Dale and 4 colts, J. H. Toney; dam, other than thoroughbred, with not less than 3 colts, Beauty and 4 colts, J. A. McClellan.

Horses for all Purposes—Stallion, 3 yrs old, Napoleon, M. Walrod; stallion, 2 yrs old, Chieftain, Jr., J. Grider, Stockton; stallion, 1 yr old, Upright, Walter E. Morris; mare, 3 yrs old, (name omitted); mare, 2 yrs old and upward, Maggie Early, J. H. Toney; sucking filly, Butterwood, J. A. McClellan; J. H. Tennant's (Contra Costa) horse, Pinola Patchen, rec for sp prem.

Roadsters—Stallion, 4 yrs old, Frank Hunter, John Patterson; mare, 4 yrs old, Magdallah, J. M. Learned; mare, 2 yrs old, Fanny, Wm. Johnson; mare, 3 yrs old, Medora, J. A. Louttit; span of roadsters, Daisy and Mate, J. A. McClellan.

Draft Horses—Stallion, 3 yrs old, Honest Abe, M. Walrod; stallion, 2 yrs old, Sau Tilden, J. P. Smith; stallion, 1 yr old, Toni Bonlogne, J. Cowell.

Carriage Horses—Span carriage horses, Zach and Dick, Frank S. Hatch; single buggy horse, Truckee, L. U. Shippee; stallion, of any breed or age, Peerless, S. Lombard, Stockton; mare, of any breed or age, Ellen Dale, J. H. Toney.

Jacks—Jack, 2 yrs old, Joe Daniels, C. C. Castle.

Cattle.

Short Horns or Durhams. Bull, 3 yrs old, Mason Duke, C. B. Hensley, San Jose; bull, 2 yrs old, Sixth Duke of Gabilan, J. D. Carr, Sallinas; Jones & Haggin sp prem for Oxford Duke; bull, 1 yr old, Ninth Duke of Monterey, J. D. Carr; sp prem for Maynard, by same owner; calf, under 1 yr, Mason Duke, Jones & Haggin; sp prem for Thirteenth Duke of Gabilan, J. D. Carr; cow, 3 yrs old, Rosa Nell, Col. Younger, San Jose; cow, 2 yrs old, Dolly Thorndale, Col. Younger, San Jose; cow, 1 yr old, Jesse Maynard, Jones & Haggin; heifer calf, under 1 yr, Lady Mary, Jones & Haggin; sp prem for Sixteenth Maid of Monterey, J. D. Carr; sp prem for Third Belle of Avenue Ranch, Jones & Haggin; sp prem for Rosa Nell, Col. Younger.

Sweepstakes—Bull, Duke of Gabilan, J. D. Carr; cow, Rosa Nell, Col. Younger. Jerseys—Bull, 3 yrs old, Keystone, H. S. Sargent, Stockton; bull, 2 yrs old, Mahomet, F. J. Barretto, Los Angeles; bull, 1 yr old, Blythe, F. J. Barretto; calf, under 1 yr, Gold Dust, F. J. Barretto; cow, 3 yrs old, Olive Thrd, S. B. Kingsley, Stockton; cow, 1 yr old, Josephine Ludovici, F. J. Barretto; heifer calf, under 1 yr, Miss Myrtle, F. J. Barretto.

Sweepstakes—Bull, Mahomet, F. J. Barretto, Los Angeles; cow, Olive Thrd, S. B. Kingsley.

Graded Cattle—Cow, 3 yrs old, Fanny Forrester, Jesse Agnew; cow, 2 yrs old, Juliet, S. B. Kingsley; H. B. Beach sp prem for cow Polly; S. B. Kingsley sp prem for calf Beauty.

Herd Premiums.

Best herd of Short Horns, Col. Younger, Jan Jose; best herd of Jerseys, F. J. Barretto, Downey City, Los Angeles county.

Sheep and Goats.

Spanish Merino Sheep—Ram, 2 yrs old, Saxon Boy, L. U. Shippee; ram, 2 yrs old and upward, California Boy, L. U. Shippee; ram, 1 yr old, L. U. Shippee; 2d best ram, 1 yr old, Monterey, J. D. Carr; best pen, 2d best, L. U. Shippee; best pen of ewes, 1 yr old and under 2 yrs, L. U. Shippee; best pen ewe lambs, L. U. Shippee.

Sweepstakes—Best ram and lambs, Saxon Boy and 5 lambs, L. U. Shippee.

Other Breeds of Sheep—Silesian ram, Sam, J. H. Toney; Cotswold ram, Silver Fleece, George McCracken; Southdown ram, Modoc, J. D. Carr; pen Silesian ewes, J. H. Toney; pen Southdown ewes, J. D. Carr; pen Cotswold ewes, George McCracken.

Sweepstakes—Best ram, of any age or breed, Saxon Boy, L. U. Shippee; 2d best ram, of any age or breed, Silver Fleece, George McCracken.

Angora Goats—All premiums awarded to Hall & Harris, of Hollister, for buck, ewe, and flock of 10 thoroughbreds.

Swine.

Berkshires—All regular and 3 sp premiums awarded to Alfred Parker, of Bellota.

Poland-Chinas and Chester Whites—Best boar and sow, H. S. Sargent, Stockton.

Fruits, Nuts, Etc.

Mrs. George S. Ladd—Five varieties almonds; Joseph S. Hale, Jr., peanuts; Robert Reid, figs; Mrs. J. C. Reid, dried figs, dried peaches, dried apricots, dried nectarines; W. H. Van Vleet, quinces; L. E. Shippee, 25 varieties apples, 2 varieties pears, 1 variety English almond; Mrs. J. C. Reid, dried prunes; George West, collection raisin, table and wine grapes; Joseph Putnam, 30 varieties apples, 5 varieties pears, 1 variety quinces; Thomas Vansandt, by C. V. Thompson, 2 varieties peaches, best collection of peaches; Frank Cutting, fresh figs, 6 specimens figs; Mrs. J. W. Sperry, 11 varieties grapes; Robert Reid, vegetables; C. V. Thompson, fine assortment vegetables, not for prem; fruit preserved in spirit, Mrs. Jos. Hale; 2d best, Mrs. J. C. Reid; fruits preserved in sugar, Mrs. Joseph Hale; 2d best, Mrs. J. C. Reid; jellies, best exhibition, Mrs. C. J. Smith; 2d best, Mrs. Van Vleet; pickles, best exhibition, Mrs. Hale; 2d best, Mrs. Reid.

Floral.

W. B. West—Five premiums for various classes of flora

plants; Mrs. James Littlehale, hanging basket; Mrs. L. M. Fairbanks, 2 pots lilies, special mention.

Wine.

George West & Co. were awarded 10 premiums for different vintages of wines and brandies.

Poultry.

Native Poultry—Robert Reid; 1 coop Bantam chickens; W. H. Van Vleet.

Agricultural Implements.

Grangers' Union—Display of carriages, open buggy; 1 Golden Gate separator, J. C. Bowden, first premium; gate model, George T. Cluff, dip; 1 Gem seed sower, Grangers' Union, dip; 2 steel plows, Grangers' Union, dip; 1 New Hampshire churn, Grangers' Union, dip; 1 hay cutter, Grangers' Union, dip. The Committee make special mention of the Follansbee double propeller pump as being the best mining and irrigating pump; would give the 1st premium to the Payne steam engine; and make favorable mention of the Rider compression engine.

Miscellaneous Department.

R. B. Lane—Wheat flour; G. C. Holman, 1 bale hops; G. N. Milco, display of buba, sp medal; Mrs. E. H. Moss, white bread; Mrs. Joseph Hale, corn bread; Mrs. J. C. Reid, pound cake; Miss Annie Littlehale, sponge cake; Mrs. J. C. Reid, coffee cake.

Contra Costa Fair Premium List.

Horses.

Thoroughbreds.—C. B. Nottingham, mare Belle, 4 yrs old. Henry Degroot, stallion Starr King. John Rodgers, suckling colt April Fool. W. A. J. Gift, sorrel mare Twilight. These animals were all commended, but there was no competition.

Draft Horses.—H. S. Raven, stallion Cardinal, 1st premium; W. and E. Shuey, stallion Paris Boy, 2d premium; J. Samuel, mare Sukey Blueskin, no competition; J. E. Worden, suckling colt Lucy Raven, 5 mos old, 1st premium; A. Sherburne, brown colt Prince, 1 yr old, no competition; George Wood, 4 yr old mare Queen, 1st premium; suckling colt, 2d premium; Johnnie Moore, mare Dolly, 4 yrs old, 2d premium.

Roadsters.—Theodore Downing, pair matched carriage horses, Henry and Selim, 1st premium; W. H. Wells, roadster, stallion Cloud, 3 yrs old, 1st premium; M. Gregory, suckling colt Joe, 2d premium; W. and E. Shuey, single carriage horse, Fashion, 2d premium; John Samuel, 3 yr old mare Jenny Lind, 1st premium; do, suckling colt, Jenny Lightfoot, 1st premium; J. J. Smith, matched carriage horses, Charlie and Sallie, 2d premium; J. E. Durham, single carriage horse, Barry Baldwin, 1st premium; Samuel Hodges, mare Dolly, 1 yr old, 1st premium; mare Lightfoot, 1 yr old, 2d premium; H. Degroot, for sorrel filly Wait-a-While, 2d premium; N. Graber, mare Gypsy Huntington, 2d premium; do, stallion Ignacio chief, 2d premium.

Sweetstakes.—W. L. McDonald, mare Rose, 1st premium; W. H. Wells, draft mares Molly and Ann, 1st premium; B. S. Durham, mare Queen, 2d premium; J. E. Durham, filly Lena Rivers, 1st premium; Samuel Hodges, family of horses, St. Lawrence and 5 colts, 1st premium; do, 2 yr old colt Judge, 1st premium; 1 yr old colt Kate, 2d premium; H. Degroot, 2 yr old bay colt Hoodlum, 2d premium; John Rogers, stallion Frank Medley, 8 yrs old, worthy; J. E. Worden, mare Flora, 2d premium; A. W. More, suckling colt Orion, 1st premium; R. O. Baldwin, roan stallion Gold Hill, worthy; A. W. Stone, stallion John, 1st premium; C. B. Nottingham, pair of work horses Puss and Dan, 2d premium; E. C. Palmer, family of horses, Flash and 4 colts, 2d premium; Nathanial Jones, suckling colt, 2d premium.

Mules and Jacks.—John Murphy, pair of mules Jack and Bill, 1st premium; W. L. McDonald, pair of mules Jack and Dolly, 2d premium.

Cattle.

Shorthorns.—R. O. Baldwin, heifer Village Bud, 2d premium; 4 yrs old, Young Myrtle, 1st premium; 1 yr old heifer Young Rose, 1st premium; sucking calves, 4 mos old, Pink and Lily, 1st premium. Charles Clark, of Santa Clara county (entry for special premium)—Cow and calf, 15th Duchess of York; bull calf, Duke of York; heifer calf, Ruby 2d; heifer calf, Ruby 3d. A premium is recommended by the committee on each of the above entries. W. C. Prince, 3 yr old bull 6th Duke of York, 1st premium. J. H. Hazeltine, 2 yr old bull Alpine, 1st premium.

Jerseys.—Smith Ashley, 3 yr old bull Argyle, 2d premium; W. Z. Stone, 3 yr old bull Joe Bowers, 1st premium. Graded Cattle.—Smith Ashley, 2 yr old heifer Susie, 2d premium; Ignacio Soto, cow Shoo Fly, 2d premium; Silverio Soto, heifer Lucy, 1st premium; do, 2 yr old heifer Lady Fine, 1st premium; Walter Renwick, 4 yr old bull Ben Butler (Holstein cross), 1st premium; W. Z. Stone, 1 yr old heifer Bee Bug, 1st premium; do, sucking calf, 1st premium; T. Z. Witten, 1 yr old heifer Beauty (Devon cross), 2d premium; W. C. Prince, 1 yr old heifer Cherry (Durham cross), 1st premium; 6 mos old calf Spot, 1st premium.

Sheep.

Silverio Soto, graded Southdown bucks, 7 mos old 1st premium; 3 graded Cotswold ewes, 4 yrs old, 1st premium. W. Z. Stone, thoroughbred Southdown ewe, 4 yrs old, 2d premium; thoroughbred Southdown lamb, Tulip, 7 mos old, 1st premium; best buck, 1st premium. F. A. Hyde, graded French Merino ewes, 1st premium; graded Spanish Merino ewes, 1st premium; Lester buck and ewe, 1st premium; Cotswold ewe, 2d premium; thoroughbred Cotswold buck, 1st premium; graded Southdown buck and ewes, 2d premium. M. Gregory, thoroughbred Southdown ewes, 1st premium. W. Z. Stone, Southdown buck, 1st premium.

Swine.

Silverio Soto, Poland-China boar, 1st premium; Theodore Downing, Berkshire boar Jim, 1st premium.

Poultry.

Mrs. Sarah A. Sellers, exhibit of poultry, 1st premium; pair of bronze turkeys, 1st premium; best pair of fowls, 1st premium; pair of Emden geese, 1st premium; pair of Pekin ducks, 1st premium; Leghorn chickens, 1st premium. Barney Webb, dark Leghorns, 1st premium. Johnnie More, ducks, black California, 1st premium.

Field and Orchard Products.

Robert Hall—Mangel wurtzel beets, 1st premium; W. L. McDonald, crop of wheat, 1st premium; do, corn, 1st premium; threshed barley, 2d premium; R. O. Baldwin, Proper wheat, 2d premium; squashes, 1st premium; Wm. Caylin, crop of barley, 1st premium; do machine threshed and cleaned barley, 1st premium; do sample Egyptian corn, 1st premium; Fernando Pacheco, green peppers, 1st premium; Samuel Sellers, crop of broom corn, 1st premium; do crop of Yellow Dent corn, 2d premium; L. I. Fish, collection of pears, 1st premium; do 6 varieties of pears, 1st premium; do collection of peaches, 1st premium; do single variety of peaches, 1st premium; do exhibit of watermelons, 1st premium; do collection of foreign black grapes, 1st premium; Walter Renwick, single variety of apples, 1st premium; A. W. Stone, collection of almonds, 1st premium; I. J. Smith, collection of fruit, 1st premium; Fernando Pacheco, musk melon, 1st premium; E. G. Sellers, collection of figs, 1st premium; H. Raap, collection of grapes, 1st premium; do foreign white grapes, 1st premium; do California grapes, 1st premium; F. M. Smith, collection of fruit, 2d premium; do collection of apples, 1st premium; do quinces, 1st premium.

Honey and Preserved Fruit.

Mrs. W. Z. Stone—Honey in comb, 1st premium; Mrs. A. W. Stone, dried fruit, 2d premium; T. Z. Witten, strained, 1st premium; Mrs. Walter Renwick, fresh jar cherries, 1st premium; Mrs. S. W. Johnson, exhibit of preserved jar fruit, 1st premium; do for exhibit of fresh jar fruit, 2d premium; Mrs. S. A. Sellers, best exhibit of fresh jar fruit, 1st premium; do preserved jar fruit, 1st premium; dried fruit, 1st premium.

Flowers and Plants.

Miss Mary Nichol—Herbarium, 1st premium; Miss Rosa Blum, bouquet, 1st premium; Robert Hall, collection of pot plants, 1st premium; do floral design, 1st premium; L. I. Fish, Australian passion vine and fruit, sp mention; Miss Julia Fish, vase bouquets, 1st premium; Miss Caroline Fish, dish of flowers sp mention.

Dairy.

Mrs. W. Z. Stone—Fresh butter, 2d premium; Mrs. Walter Renwick, fresh butter, 1st premium.

AGRICULTURAL NOTES.

California.

BUTTE.

NEW ROAD.—Colusa Sun, Sept. 14: Butte county has located a road from near Dayton, between the Parrott and Pratt grants, to the Colusa line, but it requires a bridge 1,030 feet long across a slough, and the county can afford to give only \$3,000 towards it. A subscription is being asked for in Chico to complete it. By this road the farmers around Dayton would haul their wheat to Butte city.

COLUSA.

LEVEES.—Sun, Sept. 14: We attended a meeting of the farmers on the east side of the river, opposite Princeton, last Tuesday, at which it was determined to do a good deal of leveeing this fall. Trustees were appointed to collect money and take charge of the work, from the north line of township 18 to the north line of 17. M. Davis, —Campbell, and H. C. Nelson were the Trustees elected. Swamp Land district No 220, which has some \$2,300 in the Treasury, was organized by the adoption of a set of by-laws, and the election of M. Davis, C. Nelson and L. F. Moulton as Trustees. These will work in harmony for the contemplated work. The work being done on the other side will necessitate some good work on this side of the river.

LAKE.

HOP CULTURE.—Bee: T. O'Brien, of Big Valley, informs us that the hop yield will not be as good as last year. His yard of 24 acres will produce about 16 tons. He is still engaged in picking. The price is somewhat better than last year. The kind he raises is known as the English Cluster, the largest and best variety known. There are several hop yards in Big Valley, near the lake. The crop is generally profitable. The yield throughout the State will not probably be over half a crop, though what is raised is of better quality than usual. Mr. O'Brien has 62 hands employed, and expects to increase his force to a hundred. He estimates the cost of his crop at about \$4,000. If rightly managed the hop business will pay much better than raising wheat, and as it gives employment to a large number of persons, we would like to see it largely engaged in.

NAPA.

THE PRICE OF WINE GRAPES.—Register, Sept. 21: At Van Bever's Uncle Sam wine cellar, grape crushing has commenced in earnest. Mr. Van Bever is paying from \$12 to \$22 per ton. At Miglivacca's cellar, they have for several days been engaged in wine making. He is paying the same price for grapes that rule elsewhere, or from \$2 to \$4 more per ton than last season.

SANTA CLARA.

THE GLANDERS.—Mercury, Sept. 14: Dr. Savidan, a veterinary surgeon of this city, was sent for yesterday to visit some horses supposed to be affected with the glanders, on the O'Toole ranch, north of San Jose. He found 14 cases of ebriotic glanders, and recommended the killing of the horses, which will be done to-day. Men were engaged yesterday digging a trench in which to bury the bodies of the animals. Two years ago there was a case of glanders on the above ranch from which has sprung the fearful crop now about to be disposed of. There are no cases of glanders among the horses in town to speak of. If proper care is taken in keeping diseased animals quarantined from all contact with other horses, which is easily done, there need be no apprehension of the disease spreading.

SONOMA.

DESTRUCTION OF VINES.—Courier: Nicholas Carriger, one of the largest vinegrowers in Sonoma valley says: The mildew and phylloxera have attacked all the vineyards along the foothills on the west side of the valley and their yield will be cut down one-half. That the vineyards on the east side of Sonoma creek and on the west side of the valley are not, so far as he can learn, seriously affected as yet, and their prospects for a fair yield are good. General reports in regard to corn crops are excellent.

ALMONDS.—Flag: It has been stated that almonds will stick to the trees after the fifth year, but Mr. R. A. Foster informs us, that his almonds six years old, failed last year and this.

PROGRESS OF THE HOP HARVEST.—Russian River Flag, Sept. 19. The Alderson yard, now leased by Wm. Harmon, contains 24 acres, and the vines are planted 10 feet apart. On the east side of the river there are the Born, Grant and Schmidt yards, which, united with Hebron's on the west, aggregate 28 acres, and the vines are generally planted seven feet apart. However, we learn from Mr. Harmon that an acre of vines 10 feet apart will yield as many pounds as an acre of vines seven feet apart, and as his place is not expected to yield more than 13 tons, we may conclude that 30 tons will be about the yield of this section this year. At present, as 18 cents is the standing offer, the value of the crop may be estimated at \$10,800; quite a good income from 52 acres. The hops are small, but purer, more beautiful hops, will not enter market this year.

STANISLAUS.

A CASE OF GLANDERS.—Valley Argus: Mr. C. G. Hanna, who died near this place about two weeks ago, was evidently a victim of

glanders. He had a lot of old horses afflicted with the disease, but it was not known at the time that it was glanders. After describing the condition of his horses to his physician, Dr. McLean, he was warned by that gentleman to strictly guard against infection, as the disease was certainly of a very dangerous character. He continued to treat his horses, however, and soon sickened and died, and his death is attributed to disease contracted from the horses.

LARGEST CARLOAD OF WHEAT.—Stockton Herald: The largest carload of wheat ever brought to this city is now being unloaded at the Farmers' Union No. 5 warehouse, for J. D. Peters. It aggregated 24 tons. The car is built for carrying heavy machinery, and is strong enough for all such loads. The unusual size of the pile attracted attention as it passed through the city. The car was loaded by James Brown, of Modesto, and was the largest carload of grain ever shipped from this place.

TUOLUMNE.

EDITORS PRESS:—The sear and yellow leaf of the season is fast approaching. The labors of gardens and fields are drawing to a close. California has reason to be thankful for her abundance, and freedom from plague, cyclones, and general devastations. The great drawback our orchardists have to complain of is the ravages of the "codling moth." Not merely the apple has felt its influence, but the peach, and even string-beans, and other fruits and vegetables. The pear has been a large sufferer, rotting on the trees, few sound ones left for winter use. Sound fresh fruits will be scarce this winter if all the counties of the State have suffered like "Old Tuolumne." Fruit drying process has been extensively practiced, utilizing as much of the fruit as possible. The Sonora drier is in full and successful operation. There is also one in Columbia. Their success will bring renewed industry in the cultivation of fruit. Every method of perfecting the appliances of labor, elevates man in the scale of being, subduing the earth for happiness and use.—JOHN TAYLOR.

VENTURA.

EDITORS PRESS:—This county will run far ahead of her ticket this year on her corn crop. There is more acreage and a better stand than we ever had before. The cut worms took the first planting, but nearly all planted over again. The heavy fogs are favorable for it, and there is no doubt about the crop being the heaviest ever raised in the county. Husking has nearly begun in the foothills. Our corn is not the only crop looked at. Our thousands of acres of beans are being harvested, and a finer yield never was seen in the State. The late land decision of Carl Schurz has made all the people jubilant in the upper end of the valley, and they are fixing their titles as fast as possible in the land office at Los Angeles.—CONTRIBUTOR.

DISASTROUS FIELD FIRES.—EDITORS PRESS: We are having a terrible fire here in the valley and mountains. Already hundreds of dollars' worth of hogs, houses and hay have been destroyed, to say nothing of bee pasturage, in which this country abounds. The celebrated Sespe honey district is all burned over, and much personal property destroyed. A Mr. Japson lost all his bees, about 300 stands, also his boney house, and about \$300 worth of hogs. The poor man lost all his bees in the dry season, and by industry had accumulated again quite an apiary. Now again he loses all. We have had an east wind for a few days. The thermometer stands in the shade 110°; in the sun, 140° on the south end of the house. This I know from observation myself, as I have a good thermometer. Fruit of all kinds is selling for five to seven cents a pound. Money is scarce and fruit of home production is not plenty; it is all imported from San Francisco and sold at seven cents per pound.—HYBRID SCENEGA.

YOLO.

THE LEVEES.—Record-Union: The Board of Supervisors of Yolo county has appropriated \$2,000 to assist in repairing the levees in the Washington levee and drainage district, and this, added to the amount to be collected by assessment in the district, will make an aggregate of about \$5,000, which is considered to be the sum necessary to make the levees perfectly safe. The trustees of the district have advertised for proposals for doing the work and will award the contract early next week, with the understanding that the work is to be pushed briskly, in order that the earth in the embankment may have time to settle somewhat before the heavy rains.

Colorado.

GOLDEN MILLET.—Farmer: Mr. J. D. Clark of the Oak Glen cheese factory has been experimenting this year with forage crops and has met with great success with golden millet. A sample brought to this office stands fully five high, and he says will yield fully at the rate of four or five tons to the acre, and was raised without any irrigation. He says it must be sown early as it takes the season to mature. Rye also is grown and makes a good forage crop.

Oregon.

Hops.—Willamette Farmer: Hops were poor quality and poor pay last year and hop growers had every reason to feel discouraged, for it was not possible to pay expenses at the low prices received. This year we are informed that whilst owing to the dry season the yield is light, yet the quality is superior; and we learn that some of our well-known hop growers, such as Wm. Wells of Buena Vista, have al-

ready received offers at paying prices for this year's crop. It is to be hoped that a more favorable season will attend this very important branch of production, or hop growers may be discouraged and abandon the business.

News in Brief.

COTOPAXI is in violent eruption. UTAH's grape crop is better than usual. THE Odd Fellows' bank of Sacramento has suspended.

THE volume of the Amazon is estimated at 7,000,000 cubic feet a second.

TURKEY may have to pay Russia a war indemnity of 310,500,000 francs.

THE Arizona billion product this year will be in the neighborhood of \$8,000,000.

THE Tropic mine, near Idaho Springs, Colorado has been sold to Chicago men for \$50,000.

FRENCH subscriptions to the yellow fever sufferers in the United States amount to \$12,000.

THE British government has ordered the emancipation of all slaves on the island of Cyprus.

AN earthquake at Montefalco, in a province of Umbria, Italy, has rendered 143 houses uninhabitable.

LARGE deposits of fine marble have been discovered near Ishpeming, Lake Superior district, Michigan.

TRAINS on the Union Pacific run slowly at night for fear of displaced rails. Train robbers are still feared.

GENERAL SHERMAN says that he does not see how Prescott, Arizona, can get along without a woolen mill.

SINCE 1865 the spinning power of the world has increased from 2,000,000 to 3,000,000 pounds per year.

THERE seems to be an impression that life insurance in this country may be called upon to pay its own policy.

AN Indian soapstone quarry of considerable size has been discovered on Rock creek, just outside of Washington.

THE National banks charged off during the six months ending March 1st, 1878, losses amounting to \$10,903,145.

THE excess of exports over imports indicates an increasing flow of specie and of American securities toward this country.

THE center of Ryer's island, in the Sacramento, is covered with debris to the depth of 18 inches by last spring's floods.

THE beach gold excitement has spread to Half Moon Bay and at least 12,000 feet of diggings have been taken up there.

THE net profits of the Western Union Telegraph Co., for the quarter ending September 30th, are estimated at over \$1,000,000.

ONE of Custer's men, who helped to bury him, positively denies the story that the remains interred at West Point are not Custer's.

CURTNER's warehouse, at Warm Springs station, Alameda county, supposed to contain from 6,000 to 10,000 sacks of grain, was burned on September 25th.

THIRTEEN years ago the United States debt was \$7,825 per capita; to-day it is \$4,157 per capita. Thirteen years ago, the interest was \$429 per capita; now it is \$197 per capita.

A SINGLE locomotive building establishment in this country will have constructed in 1878 no less than 300 locomotives, against 185 in 1877. Railway building is on the increase.

THE proposals of the committee for acquiring and completing the Oregon Central railroad have been approved by bondholders representing \$2,811,100, in meeting at Frankfort-on-the-Main.

THE wool clip of Oregon this year is about 6,580,000 pounds, being 1,500,000 pounds more than last year. The prices range from 13 cents for the poorest to 25 cents for the best quality.

PETROLEUM CENTER, Pa., once a town of nearly 4,000 inhabitants is now a deserted village of about 100 people. The oil wells are empty.

ELLIS SPEAR has tendered his resignation as Commissioner of Patents, to take effect October 31st. It is understood the position has been offered to Ex-Congressman Halbert E. Paine of Wisconsin, but he has not accepted.

HORSES, mules, cows and oxen, and all agricultural machinery and implements, may be imported duty free for one year into the provinces of Puerto Principe and Santiago de Cuba. The term may be extended another year.

METEOROLOGICAL SUMMARY FOR SEPTEMBER.

—The report of the U. S. Signal Service officer, of San Francisco, for the month of September is summarized as follows: The mean height of barometer for the month was 29.97; mean temperature, 59.2; mean humidity, 76.1; prevailing winds, southwest; highest barometer, 30.134; lowest, 29.818; highest temperature, 78°; lowest, 52°; monthly range, 26°; greatest velocity of wind 35 miles per hour; total number of miles traveled by wind 7,033; total rainfall, .55 inches. Rainfall in August during former years: 1871, .00 inches; 1872, .04 inches; 1873, .00 inches; 1874, .02 inches; 1875, .00 inches; 1876, .38 inches; 1877, .00 inches.

A SPANISH GUN.—A Spaniard of Madrid has invented a novelty in revolving fire-arms. It consists in the addition of a special chamber for receiving from the rear end of the cylinder a portion of the gas resulting from the explosion of the cartridge, and conveying it to one of the discharged chambers to expel the empty shell.



The Bride of Death.

[Written for the RURAL PRESS by PHILMORE.]

[The daily papers contain accounts of a hopeful bride who died upon the day appointed for her wedding, and was buried in her bridal robes.]

Bring forth her robes, her bridal robes,
Bring forth her jewels rare,
And lay them on her quiet breast,
And let them sparkle there.

The precious gems she prized the most
Shall cling round her brow,
And gain in luster resting there,
Such is her beauty now.

A holy calm enshrouds her face,
Upon her lips a smile;
The bridegroom kissed her breath away,
Ere flatter could beguile.

She lies within her lover's arms,
Her head upon his breast;
There, undisturbed by worldly ills,
Let her forever rest.

Death met his bride not gloomily,
But like a spirit bright,
And bore her on his bosom,
Beyond the realms of night.

He bore her spirit upward,
But left her slumbering clay;
The spirit bride now dwells above,
In everlasting day.

A Poem with a Moral.

[The following lines were written by David Barker for the New York Post about 30 years ago, and are as admirable for their quaintness as for the important lessons they convey:]

I met a lion in my path
('Twas on a dreary autumn night)
Who gave me the alternative
To either run or fight.

I dare not turn upon the track,
I dare not think to run away,
For fear the lion at my track
Would seize me as his prey.

So summoning a fearless air,
Though all my soul was full of fright,
I said unto the forest king,
"I will not run, but fight!"

We fought, and as the fates decreed,
I conquered in the bloody fray;
For soon the lion at my feet
A lifeless carcass lay.

A little skunk was standing by
And noted what the lion spoke;
And when he saw the lion die,
The lion's track he took.

He used the lion's very speech,
(And stretching to his utmost height)
He gave me the alternative
To either run or fight.

I saw he was prepared to fling
Vile odors from his bushy tail,
And knew those odors very soon
My nostrils would assail.

So summoning a humble air,
Though all my soul was free from fright,
I said unto the dirty brute,
"I'll run, but will not fight!"

MORAL.

As years begin to cool my blood,
I'd rather all would doubt my spunk
Than for a moment undertake
To battle with a skunk!

Husks and Corn.

[Written for the RURAL PRESS by LAURA J. DARIN.]

"Do you save your corn husks to make mattresses?" asked a lady friend the other day.

"O, yes, I made one last year and intend to make another this year."

"I had four husk mattresses before I came to California, but I've never made one here. I did not know as any one used them in this State, and when I saw your corn fields I thought I would tell you something new."

"Well, I dare say it would be new to some people, but my mother taught me to make them when I was 10 years old, way back in Vermont, and I remember we used to strip the husks much finer than I do now. I only pull them once or twice in two, they will last longer than if stripped very fine."

It used to be pretty cold frosty weather in that same old Vermont before the corn was all husked, and "we little girls" had great heaps of the whitest husks brought into the kitchen where we could strip them at our leisure; and it was a very leisurely way we had with them you may be sure.

I remember on day when we were spending our time at it with all our might, a traveler called to rest and get a drink of milk. After satisfying his thirst he wanted to satisfy his curiosity about our work.

"They are making a husk bed," said my mother.

"Wonderful, surprising; that looks reasonable!" exclaimed the traveler.

"Husks won't break like straw, and when they get dusty you can take them out, cleanse them and put them back as good as ever."

"Wonderful, surprising; that looks reasonable!" again cried the traveler.

"You will last a good many years," said mother.

"Wonderful, surprising; that looks reasonable!" once more sighed the poor man as he rose to go.

After that everything was "wonderful," "surprising" and looked "reasonable" to us children, who never could forget that astonished traveler.

Although I have heard of husk mattresses in California, I have never heard of any one having a regular down East corn-husking with the "afterwards" made up of games, and pies of all kinds, with plenty of apples to name. Those "times" could happen where farms were small and neighbors near. Then, too, in many of our counties wheat is almost the only crop grown. Coast counties being favored with fogs can raise corn without irrigation. That is good for those who like brown bread, and also for those who like

Green Corn in Winter.

We have just got our sweet corn all "cut and dried" for winter use. I think it will come into the summer "jobs" after this as much as canning fruit and making jelly. The first I ever ate was sent me by "Mary Mountain," and very nice it was, you may be sure, much better, I think, than canned corn. Perhaps you have all read how to prepare it, but possibly you have not. Pick the green corn when just right for the table; husk and put the ears for a few minutes into boiling water, just to set the milk in the kernels; then cut from cob, spread and dry. In the winter take a pint of the dried corn, soak a few hours in warm or cold water, then boil gently and add salt and cream or butter.

It is pretty hard work cutting the corn from a bushel of ears, and I just wish somebody would invent a circular knife with proper machinery attached, that would do the work by just pushing the ear through. There are probably 2,000,000 farmers who would like such a machine. It could be got up at a cost of 25 cents and be sold for 50 cents each. That would bring \$500,000 to the inventor. "Wonderful, surprising; that looks reasonable!" I declare, I have a mind to invent that machine myself. Really, the idea, come to look at it, is almost worthy of "Col. Sellers." Behold the green corn cutter and the money marching right along.

The corn crop in this part of the county is not as good this year as it was last.

The Egyptian Corn.

Which we planted with great expectations, is turning out poorly. It spreads itself and the stalks grow thriftily now, but the brown was slow in starting, though planted the 1st of May, it is only just beginning to headout a little. The white is rather more forward, and we expect to get a crop from it, though not a heavy one. Where the stalks have been cut, a second growth is springing up quite rapidly. Some of the brown corn which we bought last winter, we had ground and made into a cake; the taste was quite agreeable. One would think by the color of the cake that it was well seasoned with spices, and perhaps it might be used with advantage in fruit cake, as the blacker that is, the nicer and richer it is supposed to be.

RETURN OF LOVERS' PRESENTS.—"I always thought," says "Atticus" in the *Leader*, "that the custom of lovers returning presents when an engagement was broken off was a mere matter of good taste, and that the lady might, if she liked, retain the trinkets, and the gentleman the worked slippers which had been given as tokens of affection, if they felt so disposed. Such, however, is not the law laid down by Mr. Panton, M. P. A young gentleman gave a lady to whom he was engaged several presents, and among them a silk dress, which she herself paid for having made up. The course of true love ran rough, and the match was broken off; whereupon the lady returned all his presents except the dress, which she considered she was justified in retaining, on account of the money she had invested in it. The lover sued the lady, and Mr. Panton made the order that the dress must be returned on the gentleman paying the cost of its making. It appears to me a queer decision, but the queerest part about it is what the young man wants with the dress now that he is done with the lady. Can it be that he is already engaged to another about the same size and make as his first love? And will that other receive a present of a secondhand dress as well as secondhand affections?"

DIFFUSION OF POWERFUL ODORS.—It is said that a grain of musk is capable of perfuming for several years a chamber 12 feet square, without sustaining any sensible diminution of its value or its weight. But such a chamber contains 2,985,984 cubic inches, and each cubic inch contains 1,000 cubic tenths of inches, making in all nearly three billions of cubic tenths of an inch. Now it is probable, indeed almost certain, that each such cubic tenth of an inch of the air of the room contains one or more of the particles of the musk, and that this air has been changed many thousand times. Imagination recoils before a computation of the number of the particles thus diffused and expended, yet have they altogether no appreciable weight and magnitude.—*Illustrations of Science.*

Picking Scenes in the New York Hop-Yards.

Now that hop-picking is in progress on this coast, many of our readers will doubtless be pleased to read a sketch of the scenes in the Eastern yards. Many California growers can recall scenes and characters like those described and contrast them with the somewhat different ones upon which their eyes fall in their Western homes. A correspondent writes to the *Utica* (N. Y.) *Herald* as follows: Hop-fields, like passenger coaches on our through lines of railroads, show human nature in the aggregate. Though from a great diversity of circumstances and home life, all, both home and foreign pickers, are for once in a year, brought down to the same level of sun-browned faces, the girls and women being clad in their once cast-off calicoes and Shaker bonnets, the boys and men in their formerly discarded clothes, picking in the shadow of the typical broadbrimmed hat.

The boxes, with a capacity of seven bushels each, are arranged in sets of four. Here, at one set, are four ruddy plump German girls, whose gabble in the speech of Fatherland is as constant as the stream of hops falling into the boxes before them, and whose characteristic laughter rings as boisterously and constantly through the fields. At the opposite box are four Dutch lads, who, like school-boys, have stuffed their pockets with stolen crab-apples to pepper the girls with at intervals when the yard master is not around. These class of pickers have their board secured for "the season," and a mortgage on a good time, and will not average above two boxes (50c.) a day. Elsewhere in the field, we find the typical old Dutch couple of sixty, dotting on their pipes, whose avoirdupois is a test for the very soil beneath their feet, jolly as the day, with only the proverbial lager wanting to accelerate their tongues beyond the understanding of any German scholar who is a product of American schools. The national love for the extract of hops is so abiding that these cannot often resist the temptation to steal away to the village brewery or saloons, of a Saturday night or Sunday, if they can induce the "boss" to redeem a few hop tickets. As Superintendent Eastman of the Hanover farm remarks: "Give me an old Dutch woman to pick hops," indeed, the proprietors of this farm profiting from their past experience, seek now to get the older class of German pickers, with an eye to a speedy harvest. They mean business and are solely after the dollars, and can be depended on to call for "hop-sack" three and more times a day. We note a very few children under 12 years in the foreign yards. Growers now, in making up their crowd, largely reject those families where the smaller children cannot be left at home, the expenses of their board not being compensated for by any picking that they are able to accomplish. In certain other yards, we find largely Irish pickers, the old, middle-aged and young of both sexes, the village servant girls predominating, whom the money and entreaties of dependent housewives cannot tempt to stay in the kitchens when the thickly crowded hop-wagons begin to make their annual festive processions through the streets. They will merrily rehearse the village gossip since last hop-picking as they busily pick from the vines their new dresses and church contributions for a new year. If our housekeepers were to advance to these servant girls the full amount they earn a hop-box for these three weeks, they would not thus sacrifice the annual fun of the fields even though they risk the loss of a "situation" for another season. They earn on an average \$15 during hop-picking.

On this line of boxes are the rollicking school girls, who chew gum as they pick, who are not working as though any financial destiny depended on their exertions to get two boxes a day, while the school boys tongues over yonder are busy reviving the tricks of their school year, as they vie with the more nimble fingers of the girls to earn their dollar a day. Here are the gloved hands, there the roughened and deeply stained, yet more deft fingers. A baker's dozen of scholars could not be rallied by the Waterville school bell till after September 15th. Here is a group of college boys, the gloved and the ungloved, who worry the box-cupiers by false cries for "hop sack," and who quietly hum to the overseer as they pick,

"We think it is no sin, sir,
To pick a few leaves in, sir," etc.

Over the way is a family, man, wife, and four children, who are picking hops this year, not for fun or health, but for dear life, or better, dear money. Scores of families who have had little or no work during the year are now bending every energy to lay up from \$50 to \$75 for the winter needs. One man and wife of this class picked 11 boxes on Tuesday last, working from sunrise till dark, thus earning \$4.40 for the day. This class almost begrudge the darkness that compels sleep, and often they work late into the night to prepare the next day's meals to take into the hop-yards for their families. This class furnishes the ones that our growers seek to employ, for a two-fold reason, charity and self-interest, and growers often advance an extra five cents per box to secure such pickers through a harvest. Then there are the tramp hop-pickers that necessity only compels the growers to employ, who eat heavily and pick lazily, who make the farmers nervous during their stay, who change from one farm to another as often as they can get tickets redeemed, who at night come to the village or "center" to attempt to get their tickets exchanged for poor

whisky, who may be found next day on a roadside lounge outside the village precincts, if, perchance, they have escaped the police officers of Waterville. Growers are checking this class, the present year, by having their tickets "not transferable," and by refusing to pay off, even partially, before the end of harvest. The rebellious or so called "Molly Maguire pickers," who spend more time in attempting to organize strikes on the farms than in picking hops, are meeting with no permanent success this year, and are given a wide berth as soon as detected.

California.—An Allegory.

At the invitation of Mr. Oscar Kunath we paid a short visit to the gallery where his picture "California" is exhibited. "California" is a queen of tall, masculine yet graceful and symmetrical figure. Upon her head is a crown of bright ripe cereals, clasped above the forehead by the royal jewel, a full blooming rose. A long, loose garment of cloth of gold, bound on the waist, falls gracefully to her feet, and over her shoulders and reaching also to the ground, is thrown an ample robe of regal purple. She stands firmly in the recess of a lofty weather-beaten rock. Behind her to the right tower two brother sequays, just enough of which is seen to suggest, with the help of the surroundings, the immensity of their height. Further to the right and way below are the cliffs of the Yosemite. On her left a life-like oak lifts its branches, and in the distance is the Golden Gate, not so far but that the guardian fort can be distinguished. Through the Gate rolls the Pacific, stretching away to the dim horizon. Back from the horizon and reaching up the western sky, spreads a vast sheet of veritable summer clouds, overcharged with flowing wealth for her kingdom. In front of the Queen and to her left lies a grizzly, his paws folded comfortably beneath his chin as he reposes. At the right of the Queen the rock rises a few feet to form a barrier between her and the vast, deep valley beyond, a sort of arm to her throne. Down this rocky arm, and covering it, a grapevine trails. Where the vine reaches the more level rock, and reaching around in front almost far enough to disturb the bear, there are piled in careless profusion the fruits of the kingdom. There are white grapes and purple, the apple, the peach, the plum, and representatives of semi-tropic as well as temperate climates. Below the fruit is heaped the more substantial though less prepossessing product of the mines. The malachite and cinnabar attract the eye by their colors, but a second, more thoughtful glance, finds worthy occupation in studying the less showy pieces.

Standing upon the throne in the midst of her dominions, "California" makes but one motion. She stretches her right arm out over these her treasures. The attitude is one of majestic command, and if her countenance showed less voluptuousness and more of forcible intelligence, her extended arm might symbolize progress as well as unbounded control. It is our State in her stretch of territory, her resources and wealth, that "California" represents. As an allegory, it is as successful as it is interesting, and this is paying it a high tribute.

GOOD DEEDS.—The weary traveler in the South of Spain, who, after passing many an arid plain and many a bare hill, finds himself at nightfall under the heights of Granada, will hear plashing and rippling, under the shade of the spreading trees and along the side of the dusty road, the grateful murmur of running waters, of streamlets whose sweet music mingles with his dreams as he sleeps, and meets his ear as the first pleasant voice in the stillness of the early dawn. What is it? It is the sound of the irrigating rivulets called into existence by the Moorish occupants of five centuries ago, which, amidst all the changes of race and religion, have never ceased to flow. Their empire has fallen, their creed has been suppressed by fire and sword, their nation has been driven from the shores of Spain, and their palaces crumble into ruins; but this trace of their beneficial civilization still continues, and in this continuity that which was good, and wise, and generous in that gifted but unhappy race still lives on to cheer and refresh their enemies and their conquerors. Even so it is with the good deeds of those who have gone before us. Whatever there has been of grateful consideration, of kindly hospitality, of far-reaching generosity, of gracious charity, of high-minded justice, of saintly devotion—these still feed the stream of moral fertilization, which will run on when their place knows them no more, when even their names have perished. The vision of a noble character, the glimpse of a new kind of virtue, does not perish. A thing of goodness, like a thing of beauty, is a joy for ever.—*Dean Stanley.*

A THOROUGH CURE.—A Georgia paper says: A farmer living in the Morven district undertook a few evenings ago to cure his hogs of vermin by rubbing them with coal oil. He provided himself with a fat lightwood torch, and just as he had gotten them well greased a spark fell on the back of one, and in an instant he was in a light blaze. The flames communicated to the others, and in a few moments the drove were running wild, fleeing with lightning speed, and appearing in the darkness like fire fiends. The next day the farmer found his bacon not only cured, but "done brown."

Chaff.

COSTLY embroidery—Our Texas border. KANSAS blackberries are said to be as large as goose eggs.—Ex. None but a terrible goshing would believe it.

BARNUM is training some dogs to play baseball. They are known as the K nine.

A **WOMAN** in Kansas was carried ten miles and married to the man she hated while asleep.

WE love to lie beneath the shade and quaff the cooling lemonade, and also feel the festive ants crawl slowly up our summer pants.

EXAMINATION of the seat of the breeches of our youngsters develops the fact that there is nothing new under the son.

A **LONDON** belle recently slipped a piece of ice down the back of the Prince of Wales by way of a joke. We presume he turned a cold shoulder to her.

WHEN a boy bats a ball through a parlor window, the boy may not lose his inning, but the man who owns the window is invariably put out.

INDIANS are in habit of driving buffalo into the Rollingstone river, where they are drowned and then fished out for food. The Rollingstone gathers no moose, however.

A **PHYSIOLOGICAL** writer is stating that in a few generations American women will be taller than the men. Nevertheless we propose to sell short on the women. That's the kind of a broker we are.

"THE cat in gloves," said Franklin, "catches no mice." Indeed no, not she. When the cat is able to wear gloves she can afford to buy her mice, ready dressed and cooked. Bully for the cat in gloves!

A **POETESS** weighing one hundred and sixty pounds, yearns to "twitter as a bird on some lone spray." When she gets on a spray and begins to twitter there is going to be an item for the local paper, unless the spray is as thick as an underground gas pipe.

HE SURVIVES.—A young man who was recently rejected by his angel at Yuba City, immediately lost his appetite and began to pine away. His friends thought he would soon be laid away in the silent tomb; but last week he went to Santa Cruz and saw the object of his affections—or what was left of her—in a baggy flannel suit and an old straw hat, bathing in the surf. That young man now eats three hearty meals per day and a big lunch between times.

A Chapter of Bulls.

Why a blunder of speech should be called a "bull" is more than we can explain, unless it is so often the case that they butt the speaker off the track. Be that as it may, we give herewith a few remarkable ones, condensing them to save space.

A young fellow listed in the seventy-fifth regiment, so as to be near his brother who was in the seventy-fourth.

A biography of Robespierre says that "he left no children behind him but his brother, who was killed at the same time."

A Dublin attorney said that no newspaper should publish a death, unless informed by the party deceased of the fact.

Coote, an Irishman, one time locked up a friend's room and hid the key, having first left a letter in the room to tell him where to find the key.

A savings bank depositor explained to a friend, that if you "put money in the bank to-day, you can draw it out to-morrow by giving a fortnight's notice." That would suit some of our citizens just now.

A cavalryman undertook to carry a comrade off the battlefield who was wounded in the leg. Coming to the hospital he found that his friend's head had been shot off on the way. "The bloody liar! He told me it was his leg that was hurt!"

An Irish clergyman visiting Hollywood House, saw the portrait of a youthful looking Scottish king, while his son was depicted in gray beard. "Santa Maria," exclaimed he, "is it possible that this king was an old man when his father was born?"

Sir Isaac Newton called his valet to move the grate back, as it was burning him, never thinking that he could move himself back. It was he, too, we believe, that had two holes cut in the door for his cats to go through—one large one for the big cat, and a small one for the kitten.

Sir Boyle Roche, Irish, as his name implies, probably made more bulls than any one known public speaker, before or since his day. He "stood prostrate at the feet of his sovereign," denounced "a certain anonymous writer named Junius," and proposed an act of Parliament that "every pint bottle of wine should hold a quart." He rebuked his shoemaker for having made one of his boots *shorter* than the other, when his express orders had been to make one of them *longer* than the other. In one of his speeches he innocently said, "I don't see, Mr. Speaker, why we should put ourselves out of the way to serve posterity. What has posterity done for us?" To cure the blunder, he explained that "by posterity I do not mean our ancestors, but those who are to come immediately after us." At another time he said, "Mr. Speaker, the profligacy of the times is such, that little children, who can neither walk nor talk, may be seen running about the streets cursing their Maker." Incurable hoodlums even in that day.

Young Folks' Column.

How We Got Melons.

(Written for the Press by M. P. OWEN.)

Well, there were six of us living in calling distance of each other, about a mile out from the Ohio river, opposite the Six-Mile island above Louisville. I mean six boys, ranging from 12 to 15 years old, and we had formed ourselves into a kind of "protective union"—an alliance, offensive and defensive, in order that we might the more effectively defend ourselves against the abuses of the boys of a neighboring village, and bring the rascals to justice when they took our melons or gathered our hickory nuts without leave. And we established a "code of honor," in which we declared it to be wrong to take melons from a neighbor's patch without asking for them, or fruit from his orchard, or nuts from his trees in the pasture. We all "pledged our fortunes and our sacred honor" to stand by each other in carrying out these declarations of honest dealing, as well as many others which we had established in order to bring boys up to a high moral standing.

Well, here comes a "test case." A neighbor, living on the island, raised a great many fine melons for the Louisville market, and, as he made it a business for his living, he thought it would not do to give them away to boys. But we always treated him to apples, cider and nuts when he visited us, and we thought he was stingy to not give us melons when we asked for them, as his melons were better than ours. Now, we were in the habit of going to the river every week to bathe, and it was just a nice swim to go to the island and back. So we held a council one day to determine what course to take to get some melons. We thought we could not afford to buy them, for we needed all the money we could manage to get honestly to keep ourselves in marbles and pocket knives, and go to the shows, and we thought it a public wrong to encourage such meanness any way. So we concluded to go and ask the man again, civilly, for a melon, and if he refused again, we would swim the river lower down, where we would be concealed by the willows, and go into his patch and help ourselves.

And now comes the times that "tries boy's souls." It was really a new business to us, and it took a good deal of courage to nerve ourselves up to the work, for in all our reasoning to the contrary, it looked a good deal like stealing to the most of us. But most of the older boys of our club said it was right and we must pull together. Off we went, and very soon five boys were emerging from the melon patch, each with two large melons, making for the river. As soon as we got to the water, we secured the melons by cutting a willow stick about three feet long, and running each end into a melon we put the stick across our necks and let the melons float on either side of us, and thus we had a very easy passage back to the home shore.

Now, while five of us were getting melons, one went and got their boat and brought it over, so that they should have no way of pursuing us. When we were all back on the home shore and feeling secure, we sat on the beach half dressed, and commenced eating our melons.

But the owner of the melons had discovered us, and coming to the river, he hallooed to us to bring the boat to him, as he wanted to use it. But we were up to "snuff," and told him we hadn't time. After trying every device to get us to take the boat back, and not succeeding, he told us then that we had been stealing his melons, and he would have our "scalps," and in order to "gather them in" he started a very large dog into the water after us.

Now, as we had made no preparation for war, we thought our best show was to get away pretty lively, and elude the pursuit of the dog. There followed a lively and ludicrous scene, for we were none of us more than half dressed, and seeing the huge bull dog plowing the water and barking fiercely as he was advancing rapidly toward us, we gathered our pants, shoes and hats and made good time through the tall weeds in search of a place of safety. When we had got far enough ahead of the dog to allow time to draw on our pants and shoes, we halted and held a "council of war." In the flight from the dog we had run some distance in a small creek in order to make the dog lose our track, which had the desired effect, and this gave us a little more time for dressing and council, which we improved like veteran soldiers in a fight with Indians.

One proposition after another was put and discussed rapidly and logically, and after discarding several measures as untenable, we remembered that there were a lot of bleached bones of a dead horse's carcass near a high fence not far off, and we determined to arm ourselves with those bones and use the fence for "breast works," and fight the enemy till the "last boy fell in the last ditch." Just as we had come to this conclusion we heard the fierce and terrible barking of the dog on our track, and putting up our best speed we gained the fence and pile of bones in good time, and each fellow gathering him a bone, like Samson of old, we marched bravely to the "front" and waited for the advancing foe.

We did not wait long, for he had got our track again and soon came up with great ferocity and

terrible barking. He attempted to scale our breastwork, but the fence being a high rail fence, it was difficult for him to get over, and the cracks between the rails were rather small for him to get through, so we had him at a disadvantage, and we made the best of it. As he would climb the fence we would deal him such terrible blows over his head with one bone that he would go staggering back to the ground. This enraged him the more, and bull-dog like, he determined to stay with us till he had us in the last ditch. Seeing his determination we had no alternative but to kill him, or stun him so we could leave, and we began to feel some anxiety about that matter, for the sun was getting behind the trees. We selected our "Sampson" and put him in the most favorable position, armed with the best leg bone and being well supported on either flank, he made a valiant and successful charge and brought the enemy down: not dead, but badly stunned and demoralized. Just at this stage of the battle we heard the owner of the dog hallooing and encouraging him on to the fight, but having silenced one enemy by a hard fought battle, we concluded to make a rapid retreat before the next came on the field, and leaving the enemies dead on the field and taking our wounded with us, we made a lively retreat toward home.

And now if you will promise, and stick to it, (as we did) that you will not go into a melon patch without leave, I will tell you next time how we got out of that scrape and what we learned by it.

Soquel, Cal.

GOOD HEALTH.

APPEAL BY THE STATE BOARD OF HEALTH.—Our State Board of Health has issued an address to the people on the subject of yellow fever, which contains the following appeal: Experience teaches, that when epidemics prevail with exceptional malignity, they often break through the ordinary restraints, especially when local causes favor their propagation. Hence it is advisable, on this account, as well as for general purposes, that sanitary precautions be adopted, both by individuals and families, and by boards of health and public authorities. The State Board of Health, therefore, urge upon citizens the necessity of using every precaution to secure perfect cleanliness and pure air in and around their dwellings, and upon the authorities to enforce the laws in relation to the cleansing of the streets and alleys, the purification of cellars, cesspools and privies, and the ventilation of drains and sewers. Diphtheria still rages in a number of localities on the Pacific slope, and its fatal incursions will be invited by damp and filth, and crowding and other insalubrious conditions. Besides, there are other diseases from which our population would be protected by the adoption of proper hygienic measures.

POISONOUS GLOVES.—Neither in its application to paper-hanging nor ball dresses, in hat linings and hose, or even in violet powder, would manufacturers seem to have exhausted the infinite variety of arsenic. Iron says: A nice thing in gloves, which we first heard of from Germany, is colored a fine marine blue; and a Major Von B., who bought a pair, and exhibited, after wearing them, severe symptoms of arsenical poisoning, had them analyzed, when a considerable quantity of arsenic showed signs of its presence. Later, several young ladies in Leeds have been affected in a similar way from the same cause; in one instance the symptoms, although local, were very severe. The criminal in such cases—for the man who makes and knowingly sells such deleterious goods is a criminal—is difficult to reach; and it is a real anomaly in jurisprudence that so many slight offences should be severely punished, while a man, for a paltry profit, may poison a whole neighborhood with absolute impunity, and be paid by his victims for doing so.

A VIOLENT TREATMENT.—A woman near Prague suffered so severely from gout in the arm that she could not obtain rest or sleep, and the limb in which the disease had settled was rendered entirely useless. Her husband, having heard of a countryman who had been completely cured of rheumatism after being accidentally stung by a bee, persuaded her to try this disagreeable remedy, which, as he pointed out, could hardly prove so painful as the disease. She consented, and allowed three bees to be placed on her arm and to sting her in several places. Surprising results ensued. The patient soon afterward fell into a long and deep sleep, the first real sleep she had enjoyed for six months, after which the acute pain disappeared; and when the swelling produced by the stings subsided the arm recovered the power of motion and the gout has not since reappeared.

NEURALGIA AND RHEUMATISM.—A correspondent of the *German Town Telegraph* says: A very simple relief for neuralgia is to boil a small handful of lobelia in half a pint of water till the strength is out of the herb, then strain it off and add a teaspoonful of fine salt. Wring cloths out of the liquid as hot as possible, and spread over the part affected. It acts like a charm. Change the cloths as soon as cold till the pain is all gone; then cover the place with a soft, dry covering till perspiration is over, to prevent taking cold. Rheumatism can often be relieved by application to the painful parts, of cloths wet in a weak solution of sal soda water. If there is inflammation in the joints, the cure is very quick. The wash should be lukewarm.

DOMESTIC ECONOMY.

Cooking Egyptian Corn.

EDITORS PRESS:—Will you be kind enough to inform me through your valuable paper how to cook Egyptian corn?—CONSTANT READER, Washington, Alameda Co.

EDITORS PRESS:—Complying with your request to answer the above query, I would say that if your Egyptian corn is of any color except the purest white, don't cook it at all; feed it to hogs, fowls, etc., but don't try to eat it. The brown, or white hybridized with brown, is not fit to eat.

The best form in which the white can be eaten was published in the *RURAL* from my pen last year, but I deem it worth repeating.

Gather the heads as soon as the kernels are in the milk; rub or thresh out the grain, and clean it from what little chaff there is, either by blowing the chaff out or washing it out; then put it in milk and boil it a few minutes, then season to taste with salt, pepper, butter, etc. If the corn is too hard, *i. e.*, too much ripened, to cook perfectly tender by a few minutes' boiling in the milk, it should be first boiled in a small quantity of water; as soon as the water is boiled away add the milk and proceed as before. We eat it as a dish by itself when cooked and seasoned as above. But sometimes we cook it without seasoning and then eat it with sorghum molasses, milk, sweetened cream, meat gravy, etc. In either case what is left over is of the consistency of mush; we cut this into slices and fry it after bacon, or if I am batching it, I run it through a sausage grinder with cold meat and make it an ingredient of hash, which is my favorite way of disposing of all cold victuals. The pure white Egyptian corn, grown under favorable conditions, is too palatable when brought to the table in any form to require recipes for its use. When ground, I prefer to have it ground like flour, and used for pancakes, fritters, muffins, etc. Many persons who use it extensively have it ground coarse and use the same as other corn meal is used.

W. A. SANDERS.

Kingsburg, Fresno county, Cal.

[We have received from Prof. Sanders with the above some other points concerning the uses of this grain for forage, etc., which we will give in the proper place next week. We thank the Professor for his contribution. We should like to hear of all successes or failures which our housewives experience with the Egyptian in the kitchen.—EDS. PRESS.]

The Fig in the Kitchen.

EDITOR'S PRESS:—The fig crop is very abundant and should enter more into domestic culinary use. Figs are healthful, toothsome and capable of being used in a great variety of ways. They make a splendid substitute for raisins in the making of a fruit cake. Fig cake is one of our chief dishes on the table. They also make a splendid sweet pickle, spiced. They are also good for munching at odd times, when engaged sociably around the domestic hearth.

One reason why they are not more in use, is, the careless way they are sent to market. They should be picked when slightly shriveled, dried in the shade. The sun browns them. When sufficiently dry (soft dry) they should be scalded with hot water, spread out for 24 hours, and then packed into boxes. Such is my process. Figs will keep moist and good for a long time. The black fig should be a household necessity, supplying the place of pernicious drugs both for young and old, being of a laxative nature.

JOHN TAYLOR.

Mt. Pleasant, Tuolumne County, Cal.

Recipes.

(Written for the *RURAL PRESS* by L. J. D.)

The Cream of Buttermilk.—Take half a pan of buttermilk, set it on the stove and let it come to scalding heat; then the thick creamy part will have risen leaving the whey at the bottom. Skim off and use as you would other cream, only take more of it, for pie-crust, doughnuts or biscuits, as well as other things. Sometimes the thick part will sink leaving whey on top to be turned off.

Strawberry Candy for the Children.—Half a cup of strawberry-juice to a cup of sugar; boil 15 or 20 minutes, take out on buttered plate and ladle up and down with spoon, or pull it. When you are putting up the berries or when you open a can for the table, some of that juice will do.

SCALLOPED MUTTON.—Cut cold boiled or roast mutton into bits, removing all skin and gristle. If you have no gravy, make it by stewing the scraps and bones in a little water, then season with pepper, salt and tomato catsup and strain it over the meat. Boil some potatoes and mash them while hot until they are free from lumps, then beat with a fork until white and light; add a lump of butter, some milk and lastly a beaten egg. Mix well, then place the meat and gravy in a pudding dish, spread the mashed potato, which should be quite soft, smoothly on top, brush it evenly with a beaten egg and bake it in a quick oven until it is a beautiful golden brown. This makes an excellent breakfast dish, and can be prepared, ready for baking, the night before. Especial care should be taken to have plenty of gravy, as it is absorbed in cooking, and the dish will not be so palatable if too dry.



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SAN FRANCISCO:

Saturday, October 5, 1878.

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Smithsonian Medical and Phrenological Institute, S. F.; Barlow J. Smith, M. D., Proprietor; Money Advanced on Wheat, McAfee Bros., S. F.; Samuel Jelly, Watchmaker and Importer of Jewelry, Sacramento, Cal.; To Grape Driers, Geo. A. Deitz, Sacramento; Asher's Opposition Gallery, Sacramento; McFarland & Farr, Attorneys for Land Claimants, Sacramento; The California Horse-Power and the Golden Gate Ground Roller and Clod Crusher, Wm. Gutenberg & Co., Sacramento; Taft, Totman & Farnsworth, Mechanics' Mill Co., Sacramento; Plants, E. P. Roe, Cornwall-on-Hudson, N. Y.; Commercial Hotel, Stockton, Cal.; Fred C. Hahn, Proprietor; Mansion House, Stockton, Mrs. M. A. Holder, Proprietress.

The Week.

One of the most discussed topics of the week has been the little foretaste of winter which came in the showers of Saturday and Sunday. Quite an area was covered by the clouds, as reports mention rain from Salinas to Marysville and from the Bay across the interior until rain turned to snow flurries on the Sierras. Amounts of precipitation vary from one-third to two-thirds of an inch in different counties. We do not hear of any damage to outlying crops, although there is quite an amount of grain still waiting for the thresher. The rain was too light to cause the sprouting which has afflicted European grain growers this harvest; and more than this, our storm was fleeting as a frown upon the face of beauty, so quickly was the darkness kissed away by the hastening sun and the moist eyes brightened by the fragrant atmospheric kerchief. We doubt not there was a sensation of alarm in the raisin vineyards, and perhaps some bloom lost in the bath. There was also anxiety among builders whose new houses were left out without their caps and coats on. As a rule, however, the rain, being too slight to germinate seeds and spoil "dry feed," may be regarded as a refreshing dust-allayer and little more.

Thirty-Three Million Cents for France

France is not generally counted among wheat importing countries, because she, as a general thing, supplies herself, and sometimes pours a surplus over into England. This year France has had bad luck with her wheat crop. It promised well enough, but long rains coming on just when this grain had passed the reaper, made sad havoc with the harvest. The grain was reported, by Paris papers of September 1st, to be sprouting and rotting in the sheaves. According to the most careful figures of the French statisticians the country will need to import 7,000,000 quarters, or about 33,000,000 cents of wheat. The London Farmer pertinently asks whether France and England can both supply themselves at the low rates which are now prevailing.

There is another point to influence the price of wheat. Algeria, which usually is one of the supplying countries for England, must import for her own needs this year. There is literally no wheat in the country, and under such auspices there would be nothing astonishing to see several hundreds of thousands of quarters go that way, instead of coming from that direction to England.

The hope of all these competing wheat buyers abroad is now resting upon the large amounts promised from the United States, as Russia and India are both crippled this year. The English papers are beginning to perceive that although we shall have large amounts to send them, there is no reason to believe that our crops will be at all beyond computation, as reports early in the harvest made them. As each week passes it seems more clear that the prospect for higher prices before another crop can be harvested is good. Even though the great war which was prophesied was not realized, it is becoming more sure, as we have often said, that war was not needed to establish good prices for the crop of 1878. We do not claim any great prophetic skill because events are turning as we said; the conclusion was simply reached by a mild conservatism which does not allow us to be carried away when the professional prophets are bringing forward their extravagant figures. There are too many contingencies affecting all harvests to warrant a thorough allegiance to prospects. Thus it is being now proved that the tremendous promises in the prairie States must be shorn down a little to meet the facts. The latest report from the Department of Agriculture, at Washington, says: "September returns indicate an average of 87% in the condition of the wheat crop, against 92% in September, 1877. The reduction is mostly due to disasters to the spring wheat crop in the Northwest. A preliminary examination of the returns of acreage indicates that the breadth sown in 1878 was about one-sixth greater than in 1877. This will more than compensate for the loss from the decline in condition, and may probably bring up the yield to the popular estimate of 400,000,000 bushels."

Yes, but 400,000,000 bushels was not the "popular estimate." That was 600,000,000 bushels; it has been shaved down one-third, and now it may not be much too great. The "estimates" have stooped to meet the facts. That is just what we foretold, and we do not claim to be much of a prophet either. The result will be good and that is, an improvement in prices.

HORSES FOR JAPAN.—We learn from the Kentucky Live Stock Record that an excellent selection of horses has been made in that State for shipment to Japan by way of San Francisco. The stock consists of six head of thoroughbreds—four colts and two fillies. They were purchased on an order from the Japanese government, and the Record says they are excellent material either for breeding of races or for improving the stock of the country. We are glad the Japanese are continuing their stock importations, but we think they might have certainly filled this order as well in California as in Kentucky. But it's all right either way. We will stop them next time.

A GOOD WORD.—The California Agriculturist, of San Jose, has suspended publication and its subscription list been transferred to the RURAL PRESS, of San Francisco. The RURAL PRESS stands at the head of agricultural journals on the Pacific coast, and we wish it the success it deserves.—Herald Enterprise.

An Opening for American Woollens in China.

The policy of our government in encouraging our consular representatives all over the world to report all opportunities for the introduction of American produce and manufactures is a wise one and may result in much advantage to our producers. It is not a new idea for consuls thus to keep their eyes open for trade. The representatives of other governments are thus alert and our own have already done good service in this direction. We trust their investigations and reports may continue. Many of them have plenty of time and the best possible opportunities for these investigations.

These remarks are called forth by a report by telegraph from Washington to the effect that the consul at Amoy, China, reports to the Department of State some important facts and suggestions relative to the trade in woolen goods. The States of the Pacific, especially California and Oregon, possess advantages for competing for the woolen trade of China which nothing can change or take away. Both San Francisco and Portland are nearer by some thousands of miles to all parts of China than any port of any other competing State in the world. California wool, and the coarser grades of Oregon, seem just adapted to Chinese uses. Some English writers have imputed the present demand for woollens in China to the enhanced cost of silk, and predict that a revival of the silk industry will cause a corresponding decline in the use of woolen goods. The consul shows that such a view is erroneous. Amoy is old, and the natural home of the silk worm and mulberry tree. Here Marco Polo discovered the beautiful cloth which he called "Zanitem"—satin. Observations from this point do not sustain the English theory. The demand for blankets, displacing dirty cotton coverlets, will certainly continue, and may be increased enormously. The use of all kinds of woolen goods must improve as their prices approximate those of cotton. Among other American articles made of wool, rugs, with pictures of tigers, dragons, etc., interwoven, are exceedingly popular.

This is exceedingly promising for our wool growing and manufacturing. The Chinese are fast learning the value of California flour and our mills are getting a profit on grinding and the "feed" in bran and middlings is left here for our dairymen and stock fatteners, and to enrich the manure which our soils need. This is much better than shipping wheat abroad, for it gives employment to our mills and millers and leaves a valuable constituent of the grain behind. It exports mainly the starch which we can best afford to part with. Not otherwise would be the building up a large trade in manufactured woollens instead of shipping the raw material eastward. It would invigorate our woolen mills and call into existence many new ones which are now being talked of. By all means let China call upon us for limitless quantities of woolen manufactures. We trust the consul at Amoy is correct in his forecast of the future.

A FODDER PLANT FOR WARM CLIMATES.

We read in Australian exchanges account of a new forage plant which is being introduced in some of the warmer parts of the Australian island. It is *Reana lucurians*, Darieu. It resembles Indian corn in its stem and style of blossoming and fruit forming. It was obtained from Guatemala, where it flourishes luxuriantly, as its name indicates, and is called *teosinte*. The plant under favorable conditions throws out several hundred stems, and thus occupies a space a yard in diameter. The young shoots are eaten by the young people, and the leaves are fed to cattle. They grow in such profusion that a single plant will keep two cattle for 24 hours. When the stems are cut off and fed, a new growth starts from the roots. The plant has been grown in the hotanic garden at Bordeaux, but it is not hardy and it is doubted whether even the south of France is warm enough for it to do well. It seems likely that our extreme south would favor its growth, and if anyone there should desire to try it, we presume the seeds could be had by the kindly offices of some firm importing Guatemala coffee to this port.

PERSONAL.—We learn from the Country Gentleman that Mr. Gerald Howatt, late of Baltimore, is coming to California to fill a responsible situation with the California Fruit Growing Association of San Francisco.

QUERIES AND REPLIES.

Insect Pests on Apple and Almond Trees.

EDITORS PRESS:—It is true as you have several times stated in the PRESS that fruit growers should be on the alert concerning the insects which have ruined so much of the fruit in the Eastern States, and are now spreading with wonderful rapidity on this coast. In this portion of Alameda county examination has shown that the most dangerous insect of the genus *Aphis* is to be found in nine-tenths of the orchards. This woolly aphis (*Aphis lanigera*) was looked upon by many as a harmless "bit of cotton," or something else, which the observer had not the spirit of inquiry to examine. Apple trees have been sold covered with this aphis, the careless purchasers thinking it was mold. The almond tree is usually supposed to be free from the ravages of pests that destroy other trees, but a few days since I discovered an almond orchard attacked by an insect which appears to be a species of aphis. Examination under the microscope show the eggs to be 1-70th centimeter in diameter or 1-175 inch. They are found on the lower side of limbs or the north side of the trunk. The appearance is that of dust. The effect is to cause the leaves to wither and fall. I send you a portion of an infected limb. I will continue the examination and report.—C. W. O., Washington Corners, Alameda Co.

From the traces of the insect which we find on the specimens received, we should not pronounce the insect an aphis, but that must be settled by farther investigation. It is certain that the pest should be sought for by those who have almond trees and when found it should be attacked with soap suds, weak lye or something of that character. Drenching with a garden syringe or daubing the reddish patches and all the parts of the limbs within reach with lye with a whitewash brush, will kill the insects and the eggs. We hope our correspondent will continue his study of the insect.

Blind Jersey Heifers.

EDITORS PRESS:—Will you allow me space in your columns to tell your readers of a very singular circumstance which occurred last winter? We had two Jersey calves; their mothers were sisters. The calves are both blind; their eyes are very large and of the most beautiful variegated colors that you ever saw. We did not discover their blindness till they were about four months old. They seem to hear very quickly, and are perfectly intelligent in every way. I should like to hear if any of your numerous readers know of a similar case, or can give any information that will enable us to restore their sight. They are now nine months old. Being very gentle they are, of course, great pets, and we are anxious to find out if anything can be done for them.—INQUIRER, Stockton, Cal.

What can our readers do for these heifers? So far as we can judge from the appearance described, the case is hopeless and the result of malformation. Wonderful things are done in the treatment of abnormal cases in human subjects, when the organs of sight are not wholly deficient, but the operations are too expensive for application to the lower animals.

Mammoth Watermelon.

EDITORS PRESS:—I send you a monster watermelon given me by a subscriber of the RURAL PRESS, Mr. George Hobler, near here, to send you. It is fully ripe and unless the R. R. agents are more expeditious than they sometimes are with freight expressage from here, there is danger that it will be over ripe when you receive it. Still the rind even will be quite a curiosity. The melon weighs 74 lbs., is 47 inches around small way, and 53 1/2 inches around long way.—J. W. A. WRIGHT, Hanford, Tulare County, Cal.

The monster was duly received and found true to description. It was cut and disposed of by our full corps of employees, resulting in feelings of pride at the glorious productiveness of the Tulare region and other inward emotions beyond expression. The thanks of the office were duly voted to the donor. Who knows of a larger melon than this one?

The Growth of Grapevines.

EDITORS PRESS:—I wish that I might have the benefit of the observation of your readers as to the effect upon grapevines of nearness to salt water. The information is wanted in order to judge of what might be expected of grapevines in the vicinity of San Pablo, Contra Costa county. Some persons have an impression that grapes cannot be grown there successfully. If anyone who has knowledge of the thrift or failure of vines in a similar situation, will favor me with light upon the subject, it will be a kindness for which I shall be grateful, and one of which may prove of much value to myself and others.—A SUBSCRIBER, San Francisco, Sept. 26th, 1878.

Will some reader give experience or observation on this point?

Papaw Pepsin.

We read a few days ago in a foreign exchange an account of some interesting results which Dr. Wittmark, an agricultural chemist of Berlin, had attained in his experiments which he had made with the sap of the melon-tree or papaw (*Carica papaya*) as a substitute for ordinary rennet in coagulating milk. This sap contains a principle bearing a close analogy to pepsin. It rapidly induces the softening and disintegration of muscular fiber, and coagulates milk without turning it sour. The fresh-drawn juice is not very powerful in its action upon milk, but when dried by gradual evaporation an extremely small quantity suffices to secure the desired effect. The material being cheap and readily accessible, it is thought abroad that it is not improbable that it may at some future time play a prominent part in the operation of the cheese dairy. There is much need among cheese-makers for a rennet principle which shall be of uniform strength and less liable to taints than the preparation from calf's stomach which they now use, and anything which promises to furnish such an agent enlists our interest.

We had proceeded thus far with our pursuit of the subject when we learned by the Los Angeles *Express* that Mr. Shaeffer, florist and nurseryman of that city, had the trees growing. We also see by a letter to the same journal that the plant is advocated for culture chiefly for its beneficial action on tough meat in culinary operations. From this letter we shall make extracts concerning the virtues of the plant, and some fuller information concerning the experiments of Dr. Wittmark to which we have alluded above. The writer mentions the statements which are made in botanical works concerning the uses of the melon tree by the natives of the tropics and then says that Dr. Wittmark, made the first scientific experiment from the leaves of this remarkable tree, which he received in a fresh state from a hot-house plant in one of the botanical gardens in Germany, and he publishes now the following facts:

"A few drops of the milky juice from the fruit were diluted with 20 ounces of water and in this mixture were cooked 10 ounces of very lean, tough fresh meat. He then cooked in the ordinary way a piece of the same meat, of similar weight, and, after a few minutes, the meat in which the papaya was put fell to pieces and the other became tough and hard.

"He then made a second experiment, wrapping a piece of meat in the leaves only, during 24 hours; he cooked it, at the same time cooking a piece of meat kept in the ordinary way. The first was tender in a very short time, the latter remaining tough. Hard boiled albumen (the white of eggs) was dissolved by a weakly diluted solution of the milky juice in about four days."

The Professor takes the ground that this milky juice of the melon tree produces the same effect as pepsin, the well-known agent in our system of digestion, which transforms the albumen and nitrogenous matter of our daily food into a compound readily assimilating with the digestion.

After this important discovery we have only to consider whether we can produce this pepsin-like article in this climate in sufficient quantities to make it an article of household use. The tree grows very rapidly, produces an abundance of fruit all over tropical America, Brazil, Surinam, West and East Indies and Mexico. The dried juice of the fruit and of the leaves can be made an article of exportation, and like other juices such as gutta-percha and India rubber, it might become a source of commercial interest to the southern section of our State.

The writer in the *Express*, from whom we have taken the foregoing points, thinks it is probable that the plant will thrive in this State, as the plants now in Los Angeles are growing in a healthy condition. The experiments now underway are certainly very interesting. If the plants will thrive under our conditions, it will then be in order to inquire farther into the application of its properties, whether it will succeed as well in the cheese vat as in the kitchen, and whether we cannot introduce a preparation of the juice which our physicians can use instead of the hog pepsin which they now employ. If this can be done, we anticipate quite a demand for the plants among chronic dyspeptics, for if they can keep their digestions growing thriftily in their dooryards, it will be almost as convenient as carrying them about with them.

A Fine Arrangement for Stock Sales.

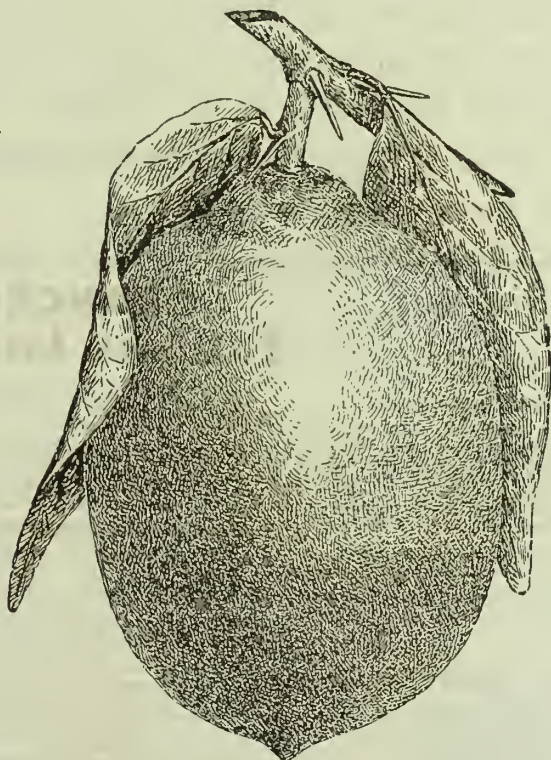
All breeders of fine horned stock and horses will be interested in the announcement that Messrs. Crego & Bowley, the well-known auctioneers, have erected a commodious and well-appointed sale amphitheater at the corner of New Montgomery and Mission streets, in this city. This location, being just one block distant from the Palace and Grand hotels, is right in the heart of the city, and, consequently, easily accessible by all classes of purchasers. Upon this site Messrs. Crego & Bowley have erected buildings covering the greater part of an entire block, and which, for extent and completeness of arrangements, are believed to be the best stock salesrooms in the United States. There is a large ring, around which horses or cattle can be moved in full sight of the surrounding raised seats, which will accommodate thousands of spectators. Here, out of the noise and dust of the streets, animals can be shown to the best possible advantage. There are in the buildings stalls for the accommodation of 200 horses, and arrangements are perfect by which herds of cattle can be boarded at reasonable rates just outside the limits established by the city and brought into the amphitheater for show and sale. This will prove of great advantage to all who desire to send fine stock and horses to the city for sale, for hitherto this large business has had to be conducted on the streets or in scattered stables through the city, where

A Sweet Rind Lemon.

There is now much demand for a good lemon, as our California seedlings are found to be undesirable in the market. The only trouble has been in the lemon and not in our capacity for growing the fruit, because the new Sicily seedlings and grafted fruit which is coming forward show excellent characteristics. We give on this page one of the candidates for planters' favors, being a portrait of one of the sweet rind lemons shown at the State fair, by D. C. Hayward, of Orange, Los Angeles county. His exhibit attracted much attention, because of the beauty, fragrance, and other good qualities in the fruit shown. Mr. Hayward showed budded trees of this variety, which were three years old, stood eight feet high, and bore from 16 to 20 lemons about the size of the one shown in the engraving, viz: about eight by nine inches. Mr. Hayward informed our reporter that by some mistake his name was not regularly entered at the fair, but the Committee recommended the award of a special premium to him for this fruit.

Mr. Hayward's establishment at Orange, Los Angeles county, is well worth a visit. He has 70 acres in orchard, and 20 acres in nursery, having 8,000 orange and lemon trees. These include several especially fine varieties, besides that shown in the engraving.

THE EXTENT OF THE RURAL'S PARISH.—Readers of the RURAL PRESS get an idea once



MR. D. C. HAYWARD'S SWEET RIND LEMON.

conveniences have not been at all adequate to the good showing of the cattle and the comfort of intended purchasers. The new establishment will be the recognized center for the sale of fine stock of all kinds, and this will work greatly to the advantage of those desiring to dispose of good animals. In addition to the accommodations for handling live stock, Crego & Bowley have facilities for showing carriages, harness and other equipments upon the raised platforms of the amphitheater. Their consignments of this class of property are immense. In short, the establishment at the corner of Mission and New Montgomery streets seems to us exactly fitted to the needs of a firm doing so large a sales business, and will enable them to dispose of property to much greater advantage than heretofore. We expect their well-conducted establishment will be speedily recognized as the headquarters for sales of cattle, horses, etc., from all parts of the State.

THE DAIRYMEN'S MEETING.—As has been previously announced, the third annual meeting of the California Dairymen's Society will be held in Young Men's Christian Association Building, on Sutter street, between Kearny and Dupont, San Francisco, beginning at 7:30 o'clock, Thursday evening, October 10th. The sessions will continue on Friday, October 11th. All interested in dairying are cordially invited to be present and take part in a general discussion of subjects of importance to dairymen.

There was an intermittent eruption of Mt. Vesuvius on the night of September 22d.

in a while of the way the RURAL PRESS brings the "utmost parts" of the earth into friendly relations. Those whose names are mentioned in connection with some agricultural or horticultural success here frequently receive letters from the antipodes inquiring more fully about their work. Thus we are informed that Mrs. George North, of Marysville, who brought out the precocious pumelo described in the RURAL last June, has received a letter from another lady pomologist, Clementina L. Bracey, of Wellington, New Zealand, proposing an exchange of seeds, etc. Thus we hope both these ladies will extend their resources of interesting growth by their introduction to each other through the RURAL PRESS.

WHEAT MALT.—We have mentioned the shortage of barley, not only in Canada and the prairie States, but in Europe. The *Mark Lane Express* has heard of some wheat being steeped for malt in England, and says that owing to the low price of wheat, as compared with that of good malting samples of barley, a great deal of wheat will probably be made into malt this year.

PLANTS AND SEEDS.—Mr Thomas Meehan of Germantown (Philadelphia) Pa., sends us his price lists of trees, shrubs, plants and tree seeds. We find the lists very full and all propagators can consult them with advantage.

ON FILE:—"Farm House Chat," M. M.; "Carson City," W. G. A.; "Floriculture," W. C. L. P.; "Apiary," B. W. K.; "Talk with Farmers' Sons," J. R.

What Town wants a Large Manufacturing Enterprise?

It is an open secret that one of our most prosperous and progressive manufacturing enterprises, has outgrown the facilities afforded it by the location in which it was founded, and its managers desire to move it to a more favoring locality. The establishment to which we refer is the Sweepstake Plow Company of San Leandro, Alameda county. San Leandro is a pleasant place in a rich region, and a small establishment manufacturing for local needs would find ample facilities. But the Sweepstake Plow Company has so far extended its trade in plows, headers, horse powers and other implements, and its wagon manufacture has grown so fast that it has become a State and not a town or county establishment. This being the case, the managers of the Sweepstake company have resolved to move their works to some more accessible location, where they can enjoy both rail and deep water privileges of transportation. This will better accommodate the public and enable the company to enjoy better facilities for manufacturing economically.

The *Record-Union* in its report of the State fair takes this subject as follows: The business of the Sweepstake company has outgrown its present place and its shipping and other facilities, as well as the company's shops and works generally. The experience of this company has demonstrated to them that all the agricultural machinery and implements, all the wagons, carriages, buggies, etc., used by the farmers on this coast can just as well be manufactured in this State as in the States east of the Rocky mountains, and that they can be made here better adapted to the wants of the people, to our peculiar climate, and so as to be afforded cheaper than the same quality of articles imported can be afforded. This extension of business would give profitable employment to California capital, would employ and pay California labor and make a home market for all California products in every line of production, and would add greatly to the general prosperity of all classes of industry and the State at large. As we said before, the company's business has outgrown their works and the facilities of the place in which they are located, and they have got to enlarge their works and intend to change their locality, where greater facilities can be secured. This subject is one that reaches beyond the apparent objects of this fair, but a moment's reflection will show any business mind that this is only an apparent and not a real departure from the Society's legitimate scope of labor. The company, in connection with other facilities, of a location to be selected, will take into consideration any inducements that may be offered by any town or city in the State in the way of land for their shops, or other bonus or subsidy. Would it not be well for the several towns and cities in the State, centrally located and having water, rail and other commercial and manufacturing facilities to look into this matter, for their own local benefits and the general good of the State? Any communications on the subject may be addressed to F. A. Hill, Superintendent of the works, San Leandro, Alameda county, California, and they will be promptly answered.

This is the matter to which we wish to call the attention of our readers in different towns which may possess the advantages which the company is seeking for. The introduction of such an enterprise, with its bustle of business and manufacture and its small army of workmen, would be a rich addition to the growth of any town. The question is what town will make the company the most favorable offer and secure its location. We doubt not there are several points which would suit the company equally well and it remains to be seen what place will give the establishment the warmest welcome. Land or other investment which a thriving town might devote to the securing of a large manufacturing enterprise would be well invested, because the influx both of labor and capital which would come with the works, would prove a stimulus to a general prosperity in the neighborhood. We would advise our friends at different eligible points to discuss the matter, as proposed above, and open correspondence with the company at San Leandro. All admit the advantage of local manufacturing establishments, and rejoice to see them established in their neighborhoods. Here is a chance to secure one whose future is assured, for its success mechanically and financially is demonstrated.

Lands for Sale and to Let.

A NEW COLONY.

100 Homes For Sale on More Reasonable Terms than ever before offered in Southern California.

Eighteen thousand acres of land in Monterey County, including the Pleito rancho, belonging to Pinkerton and Jackson, are now offered for sale in farm or homestead tracts to actual settlers. The lands embrace the finest wheat producing section in California.

Fruit, vegetables and all manner of small grain come to rare perfection in this region. For stock, hogs, bees and general farming, these lands are not excelled. Water and timber are abundant, the San Antonio river running for 12 miles immediately through the lands. Good postal facilities are already established, there being an office at the Pleito rancho, and the coast line of stages passing daily through the entire property.

The lands will be sold on the ground, and all parties desiring cheap, yet valuable farms, should not miss this opportunity of securing them. Those who first come will have choice of location.

An elaborate prospectus detailing terms and conditions of sale is now published and will be mailed to all who apply, by mail or otherwise, to the undersigned at the Pleito post-office, the point where for convenience the business in connection with this new colony will be transacted.

This is no stock company. The deeds to lands will come direct from Pinkerton and Jackson, to whom all moneys will directly pass, and each purchaser is only liable for the lands contracted for. There is no joint responsibility.

Send immediately for the prospectus, directing all communications or applications to

W. W. BROUGHTON,
Pleito Post-office, Monterey Co., California.

TO LEASE
ON FAVORABLE TERMS,
50,000 Acres of Irrigated Land in Kern County, with abundance of Water Free.

In tracts of 80 acres and upwards, with comfortable House, good Barn, and Well of excellent water.

CROPS ARE SURE.

An average of 30 bushels of wheat per acre, and other products in proportion, have been raised on this land.

INDUSTRIOUS FARMERS

With stock and implements will find every advantage in acquiring a home and a competence.

COLONIES WANTED.

For further particulars inquire of
McAFEE BROTHERS,
202 Sansome Street, San Francisco

Land for Sale in Napa County.

I am offering my lands in Foss Valley, ten miles north of Napa City, for sale, as follows—to wit:
One tract of 800 acres, including my homestead, 220 acres of which is choice valley land, the balance good grazing land, is well watered, has a large supply of wood, is well improved, has a comfortable dwelling of nine rooms, barn, granary, sheds, etc. Also, a good orchard and choice vegetable garden. Price, \$15.00 per acre.

Also, one tract of 1,020 acres, about 100 acres of which is valley, the balance good grazing hills, is well watered and has enough wood on it to pay for it. Price, \$5.00 per acre. Also, one tract of 300 acres, 40 acres tillable, a portion can be irrigated from springs, has a large amount of wood on it and 500 rods of stone fence. Is well suited to running a small dairy, and raising pigs and chickens, by which a good living can be made; price \$2,000. The climate is choice, being shut in from the chilly coast winds, but has just breezed enough to make it pleasant; title perfect. The above lands lay contiguous. I will sell the whole or either one of the above tracts on easy terms—a liberal portion can remain at 10 per cent. per annum. If desired, will sell with the land, 1,500 head of Spanish Merino sheep. Come and see me, as I am determined to sell. Address the undersigned at Napa City. WILLIAM CLARKE.

FOR SALE.

A fruit and grain ranch, containing about 100 acres, situated at the old mining town of Knight's Ferry, Stanislaus county, California. The place is extensively planted with fruit trees, vines and berries, all of the choicest varieties, of vigorous growth and bearing abundantly, every thing of this kind being raised here with the least possible care and in the greatest perfection. The facilities for irrigation, when required, are first-class, the ditch of the San Joaquin Water Company traversing the grounds. There are on the premises a commodious dwelling-house; a stone store-house of large dimensions, with cellar underneath; a spring-house, containing distillery apparatus and conveniences for making wine; also, stables and all other needed out-houses. This land is well inclosed and every way highly improved. The products of these orchards and vineyards have for twenty years commanded the highest prices in the San Francisco market, the adjacent mining camps having also taken a portion of them at good prices. There are on the land rich gold placers that could be worked with large profit, as sufficient water for the purpose can be had at low rates. The farm-house is but 5 miles from the railroad station and within an easy day's drive of many prosperous mining camps. Work horses, wagons, harness, cows, hay, farming utensils, a quantity of wine and vinegar, and much other valuable personal property goes with the place. As this fine estate must be sold, it is offered, animals, etc., included, at the low price of \$4,000, fifteen hundred of which may, if desired, remain secured on the land at the rate of 10 per cent. annual interest. Title perfect. For further particulars inquire of Claus Gercken on the premises, or of Dr. Henry De Groot, office Mining and Scientific Press, 414 Clay street, San Francisco.

BEE RANCH FOR SALE.

One of the best ranges in the State. At present working 375 stands Italian Bees. Apply for particulars to
D. W. McLEOD,
Riverside

Good Land and Sure Crops.

There has been steady and tolerably rapid advancement made in the growth of a majority of the towns in Colusa, Butte, Tehama and Shasta counties. Especially is this so in the agricultural districts where the land produces at least fair crops in all seasons—wet or dry—as does the land on the Reading Ranch. Those looking for homes in California where diversified farming will pay every year; where wood and water are plenty and easy to be obtained and other desirable advantages are to be had, should address the proprietor of the Reading Ranch.

Some 14,000 out of 26,000 acres of the grant remain for sale at comparatively low rates, in quantities to suit purchasers, on easy terms. Prices range from \$5 to \$30 per acre. The tract is between two and three miles wide, with the Northern Division of the C. P. R. R. passing centrally through its entire length. Send postage stamp for an illustrated paper containing information about Shasta County and these lands, to the proprietor of Reading Ranch.
EDWARD FRISBIE.

Anderson, Shasta County, Cal.

FARM FOR SALE.

\$4,000.—Two Hundred Acres of Land in Mendocino County.

Thirty miles from the county seat, and 20 miles from the Coast, one of the healthiest localities in the State, especially for consumptives. The place is fenced off in six different fields. Plenty of water and timber for all purposes. A good orchard. Vegetables of all kinds grow well. A good dwelling with six rooms, ceiling and painted inside, good frame barn, granary, storehouse, smokehouse, etc.

Also, Six Hundred acres of grazing land, well fenced, three miles from the above farm, plenty of water and timber for all purposes. Price, \$2,250.

For further particulars, address "B. T." care of DEWEY & CO., Pacific Rural Press office, San Francisco, Cal.

A Good Dairy Ranch For Sale

On Bear River, Humboldt County, Cal., containing 600 acres of as good grazing land as any in the State. New Dairy and Dwelling House. The land is well watered, and plenty of timber for firewood and shelter, and well fenced. I will also sell with the ranch 100 head of choice dairy cows and five horses. Price, \$13,000, one-half down, the remainder on easy terms for one, two or three years. Apply either in person or by letter to RICHARD JOHNSTON, Post-office address, Myrtle Grove, Humboldt County, Cal., or to R. J. JOHNSTON, No. 1,324 Howard Street, San Francisco.

HEALD'S BUSINESS COLLEGE,
24 Post Street,
Near Kearny,
San Francisco, Cal.

The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

LADIES' DEPARTMENT.—Ladies will be admitted for instruction in all the Departments of the College.

TELEGRAPHIC DEPARTMENT.—In this Department young men and young ladies are practically and thoroughly fitted for operators, both by sound and paper.

For further particulars call at the College, 24 Post street, or address for circulars,
E. P. HEALD,
President Business College, San Francisco, Cal.

THE CAPITAL WOOLEN MILLS,

248 J STREET,
SACRAMENTO, CAL.

DAVIS & SUTTON,

No. 75 Warren Street, New York
Commission Merchants in Cal. Produce.

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

GRANGERS' Business Association.

Incorporated February 10th, 1875.

Capital Stock, - - \$1,000,000.

OFFICERS AND DIRECTORS.—DANIEL INMAN, President; I. C. STEELE, Vice President; AMOS ADAMS, Secretary; JOHN LEWELLING, Treasurer. DIRECTORS—W. G. COLBY, W. L. OVERHISER, A. D. LOGAN, R. S. CLAY, A. T. HATCH, O. HUBBELL, THOS. FLINT.

SHIPPING AND COMMISSION HOUSE,
GRANGERS' BUILDING,

106 Davis Street, San Francisco.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

J. M. COSTIGAN, Acting Manager.

THOMAS' IMPROVED APPLE PARER, CORER AND SLICER.

Letters Patent No. 88,755.

This Machine is durable, easily adjusted and kept in order; does its work complete; slices the fruit of even thickness; so prepared, it dries evenly and quickly, say in 36 hours, thus avoiding a long exposure to the miller or moth producing the worms.

It does its work better and quicker than any other machine. Boys and girls can use it with great facility; many considering TWENTY BUSHELS a fair day's work, while some have pared and sliced THIRTY BUSHELS in twelve hours.

County rights for sale by

J. R. CRANDALL,
Auburn, California.

P. S.—An engraving illustrating this machine will appear soon.



Awarded highest prize at Centennial Exposition for fine chewing qualities and excellence and lasting character of sweetening and flavoring. The best tobacco ever made. As our blue strip trade-mark is closely imitated on inferior goods, see that Jackson's Best is on every plug. Sold by all dealers. Send for sample, free, to C. A. JACKSON & Co., Mfrs., Petersburg, Va.

L. & E. WERTHEIMER, Ag'ts, San Francisco
Take the paper that stands by your interests.

Comfort and Health Promoted!

WOODWARD'S

Clothes Clamp, for Bedsteads.

Patented December 18th, 1877.

WE CLAIM:

1st.—It holds the bed clothes firmly to the footboard without injuring them in any way. 2d.—If the covering is short, the clamps will hold them in place, when nothing else will. 3d.—Clothing can be adjusted when clamped at the foot as well in the dark as in the light. 4th.—For crabs and children's beds, it has no equal. 5th.—A woman can change clothing and make up three beds quicker and easier than she can make one without it. 6th.—When sheets are not to be changed, the clothes can be adjusted in two minutes. 7th.—Spreading on bedding with footboard turned down is as convenient as laying cloth on a table. 8th.—It hides all inequalities and leaves the bed covering much smoother than it can be made by tucking under. 9th.—The bedding can be thrown back over chairs to ventilate without opening the clamps, and adjusted again as easily as closing a book. 10th.—Turn down the footboard and the bedding can be removed in a body or separately much easier than from other beds. The Fixtures Can be Applied to any Bed, New or Old.

State and Manufacturing Rights for sale by

F. WOODWARD,
No. 56 Eleventh Street, Sacramento, Cal

WANTED.

500 TONS OF

RAISIN GRAPES and FIGS.

GEORGE A. DEITZ,

No. 81 J Street, Sacramento, California.

STUDEBAKER WAGONS.

E. E. Ames, General Agent.

49 & 51 J STREET, SACRAMENTO.

Send for Catalogue and Price List.

ORLEANS HOTEL,

SECOND ST., bet. J and K, SACRAMENTO, Cal.

This large, POPULAR and FIRST-CLASS Hotel (lately improved) is only one block from the depot. It has Mosquito Proof Rooms, hot and cold Water Baths, Free. Prices of rooms and board reduced to \$2, \$2.50, and \$3 per day. (Guests conveyed to and from the Hotel, free of charge.)

RICHARDSON & PRESBURY, Prop's.

PACIFIC WATER CURE

— AND —

ECLECTIC HEALTH INSTITUTE,

Northwest corner of Seventh and I Streets,

SACRAMENTO, CAL.

M. F. CLAYTON, M. D., PROPRIETOR.

This Institution has been favorably known to the public as a Water Cure for nearly twenty years. At the beginning of last year it passed into the hands of the present proprietor, who has thoroughly renovated, fitted it up and furnished it with all the modern improvements and apparatus for the treatment of diseases and deformity to which the human flesh is heir. Chronic diseases receive special attention, such as premonitory Consumption, Catarrh, Bronchitis, Rheumatism, Paralysis, etc. The patients are surrounded with all the comforts of home, with nurses of long experience and the best medical advice in the State.

Treatment per week	\$10.00
Treatment and Board per week	\$15 to \$20
Board per week	\$4.00
Board and Lodging	\$5.00
Russian Bath	\$1.00
Eucalyptus	1.00
Sulphur, Liquid or Steam	1.00
Grindelia (sure cure for Poison Tack)	1.00
Steau	.50
Electric	.50
Spray	.25

H. H. H. HORSE MEDICINE,
D. D. T.—1868.

As a horse medicine it is superior to any liniment ever invented. For RINGBONE, SPAVIN, SWERNEY, CALLOUS LUMPS, and all old sores, apply freely so as to blister, from three to five days in succession, and in four or five days, if not cured, repeat as at first. SPRAINS, STIFF JOINTS, BRUISES, WINDGALLS, and all slight ailments, apply a small quantity so as not to blister. Saddle Sores, Cuts, and all other sores where the skin is broken, mix the liniment half and half with any kind of oil, and apply in moderation.

WILLIAMS & MOORE, Proprietors,
STOCKTON, CAL.

THE BOSS PRUNER.

Patented January 8th, 1878.

ENTIRELY NEW!

Works on a cog principle. Smallest size cuts one inch and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

GEORGE LARKIN,
Newcastle, Placer County, California.

DALTON & GRAY,
Commission Merchants,

WHOLESALE DEALERS IN

All Kinds of Country Produce.
404 & 406 Davis Street, San Francisco.

Consignments Solicited

Stock Notices.



SPANISH MERINO SHEEP.

Choice stock of thoroughbred Bucks and Ewes, guaranteed free from disease. Purchasers are invited to examine. About 10 minutes' walk from the Railroad terminus, adjoining State University.

E. W. WOOLSEY,
Berkeley, Alameda County, Cal.

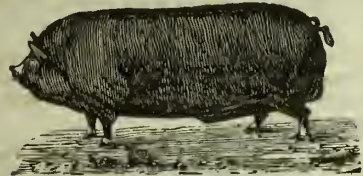
BERKSHIRES.



Breeder and Importer of the "Crown Prince," "Sambo," and "Bob Lee" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.

PETER SAXE, Russ House, San Francisco, and Los Angeles City, Cal.

BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,
18th and A streets, Sacramento City, Cal.

SPRING VALE FARM,

Three Miles N. W. of San Bernardino, Cal.



Thoroughbred Berkshire and Poland China Swine Light Brahma and Black Cochins Chickens for sale.

Poultry.

THOROUGHbred POULTRY.

116 Acres

DEVOTED TO

FANCY

POULTRY.

Unlimited Range.

Healthy Stock.

Largest Yards

on the Coast.

Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.

Safe arrival of Fowls and Eggs Guaranteed.

Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents. Address

M. EYRE, Napa, Cal

EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

Chance in the Nursery Business.

There is a good chance in Tehama County for a skilled man who will go to work and start a nursery. The location is one mile from Vina station, in Tehama County, in a good growing region of country; the land is first-class and water abundant. A man is wanted, with good references, who will start a first-class nursery in partnership with the owner of the land. Address,

S. C. DICUS,
Vina Station, Tehama County, Cal

18 ELEGANT new style Chromo Cards, with name, 10c., postpaid. GEO. I. REED & Co., Nassau, N. Y.

WAKELEE'S

PATENT

SQUIRREL



AND

GOPHER

Exterminator!!

The valuable nature of this article has tempted several inexperienced, ignorant or unscrupulous persons to force similar appearing, but very inferior, preparations on the market, which being confounded in the minds of some with this poison, has a tendency to bring it into disrepute. H. P. WAKELEE & CO. were the first to prepare poisoned grain for this purpose so that it would retain the effects for a great length of time without spoiling, and obtained U. S. Letters Patent for that only; but the POISONOUS COMPOUND is prepared by a SECRET FORMULA and has NEVER BEEN SUCCESSFULLY IMITATED. Suit has or will be commenced against all infringements.

The public are warned against attempts which seem to be made to gain a false reputation for imitations by manufacturers putting out their own poison and apparently producing astonishing results. That their operations were a system of jugglery may be proven by any farmer putting out the two poisons on the same day. One pound of WAKELEE'S will kill as much as from eight to fifteen pounds of the imitation, care being used to purchase both articles from an uninterested dealer.

Great Reduction has been made in Price of 5-pound Tins and in bulk, 65-pound Cases.

H. P. WAKELEE & CO.,

Importers of Drugs and Chemicals.

AGENTS AND MANAGERS GOLDEN CITY CHEMICAL WORKS,

Office, Corner Montgomery and Bush Streets,

San Francisco, Cal

GRAND HEADQUARTERS FOR MUSICAL BOXES.

M. J. PAILLARD & CO.,

Manufacturers and Importers of all kinds of

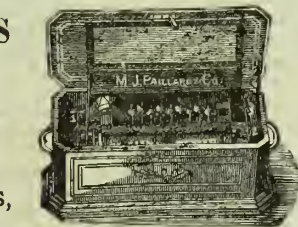
MUSICAL BOXES

—FOR—

Holiday, Birthday

—AND—

Wedding Presents,



OF STANDARD REPUTATION.

Our stock embraces the latest novelties, the newest and most pleasing airs, and the most approved appliances for rendering them with every shade of musical expression.

We offer this season many new improvements that must be seen to be appreciated; therefore buyers coming to San Francisco are invited to examine our stock—THE LARGEST IN THE CITY.

Medal and diploma awarded at the Centennial Exposition to our establishment in Switzerland for excellence in manufacture, durability, volume, purity of sound and superior workmanship. Also, medal awarded at the Mechanics' Institute Industrial Exhibition, San Francisco.

REPAIR DEPARTMENT.—Our workmen are especially educated to all kinds of intricate repairs, so that all repairs entrusted to us will meet with careful, skillful and prompt attention. We are recipients of many special awards for improvements in musical boxes.

M. J. PAILLARD & CO., No. 120 Sutter St., (Rooms 5 and 6) San Francisco.

No. 680 Broadway, New York, and St. Croix, Switzerland.

NEW MUSIC! NEW MUSIC!

At Gray's No. 105 Kearny Street,

On receipt of the amount in postage stamps, any of the following pieces will be mailed, post-paid:

BABY MINE, (Song).....Smith, 35 cts
BABY MINE, (Schottische).....Stuckenholz, 35 cts.
EMMETT'S LULLABY, (Piano Solo)....Far West, 35 cts.
LITTLE TORMENT, (Schottische).....Far West, 35 cts.
THE SNOW LIES WHITE, (Song).....Harriott, 35 cts.
ALCANTARA, (Galop).....Chauncey, 75 cts.
GOLDEN OPHIR, (Galop).....Yanke, 50 cts

Send for complete Catalogue of Music and Descriptive list of the



State where you saw this advertisement.

BERMUDA GRASS

Roots and Cuttings For Sale,

Ready for Delivery after the First Rains.

R. J. TRUMBULL & CO.,

419 and 421 Sansome St., San Francisco.

ANNUAL MEETING.

The annual meeting of the stockholders of the Grangers' Bank of California for the election of Directors, will be held at the office of the Bank on

Tuesday, the 8th day of October, 1878,

At one o'clock P. M.

ALBERT MONTEPELLIER,
Cashier and Manager,
San Francisco, Sept. 3rd, 1878.

C. HERRMANN'S



FALL STYLE HATS NOW OUT!

At No. 336 Kearny St., bet. Bush & Pine,

—AND—

910 Market St., above Stockton,

SAN FRANCISCO.

Send for our Illustrated Catalogue.

A Good Business For Sale.

THE YOLO AGRICULTURAL WORKS,

CONSISTING OF

WOOD and IRON WORKING MACHINERY

—AND A—

FOUNDRY,

Suitable for all kinds of Agricultural Manufacturing or

House Building. Address,

BYRON JACKSON,
Woodland Yolo County, California.



BURNHAM'S
WATER WHEEL
STANDARD TURBINE
WARRANTED BEST & CHEAPEST.
Also, MILLING MACHINERY.
PRICES REDUCED APR. 20, '78.
Pamphlets free. OFFICE, YORK, PA.

BREEDERS' DIRECTORY.

CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 302 Davis street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.), Breeders of Short Horns and their Grades.

R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

GEORGE McCRACKEN, San Jose, Cal. Pure blooded Cotswold Sheep for sale.

POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importers and Breeders of Thoroughbred Poultry. Eggs for hatching.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

W. & J. ROBINSON, Hanford, Tulare Co., Cal., Importers and Breeders of Thoroughbred Berkshire Swine and Pure Brown Leghorn Fowls. Scotch Colley (Shepherd) Pups for sale. Imported parentage on both sides.

A. J. TWOGOOD, Riverside, Cal., Importer and Breeder of Pure Bred Poland-China Hogs.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

Grangers' Bank of California, 42 California Street,

SAN FRANCISCO CAL.

Authorized Capital - \$2,500,000,
In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

ALBERT MONTEPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

TO LUMBERMEN.

The Property of the Duncan's Mills Land and Lumber Company,

Sixty miles from San Francisco, at the terminus of the North Pacific Coast Railroad, Sonoma County, is offered for sale on very favorable terms.

There are 3,500 acres of Redwood Timber land, new steam Saw-mill, general store, dwellings, logging railroad, water works, etc.

Satisfactory reasons for selling will be given to prospective purchasers.

Also, if desired in connection with the above, a lumber yard on the Bay of San Francisco, having superior facilities for shipping by rail or by water, and having a large and constantly increasing business.

For full particulars address

JOHN F. BYXBEE,

No. 22 California Street, San Francisco, Cal

A Country Store Wanted.

—AT—

GLEASONVILLE, TEHAMA CO., CAL.,

May be found a good place to open a country store. We have just finished a splendid new building. It is now ready for goods, and we will rent it on reasonable terms. This place is in the midst of a rich farming country, where crops have never been known to fail. The nearest stores are from 15 to 18 miles distant.

The town of Gleasonville has a good hotel, blacksmith and shoe shop and saloon, but no store. The storekeeper could use from \$5,000 to \$10,000 to advantage, but can do a good business with less. A good man with money to command is wanted to open the store.

Address, GLEASON & MASON,
Gleasonville, Tehama County, Cal.

SHARPLESS STRAWBERRY

Largest and Best.

Raspberries, Blackberries, Fruit Trees, Vines and Plants. Send for catalogue to W. L. PARRY, Cinnaminson, New Jersey.

Hight of Colorado Peaks

In a recent volume of the geological and geographical surveys prepared for the government by Lieutenant Wheeler's expedition, the following are given as the points in Colorado exceeding 13,000 feet in height: Altar Peak, 13,254; Antoro Peak, 13,497; Argentine Pass, 13,286; Canby Peak, 13,356; Del Norte Peak, 13,084; Dunn's Peak, 13,502; Engineer Peak, 13,076; Evans Mountain, 14,321; Glacier Peak, 14,243; Gray's Peak (north) 14,380; (south) 14,411; Half-Moon Creek Peak (south of) 13,552; Handie's Peak, 14,149; Divide between Henson and Cebolla Creeks, 13,003; Hunchback Peak (Oso) 13,755; Hunt's Peak, 14,055; Mount Harvard, 14,152; Hurricane Peak, 13,565; La Plata Peak, 13,316; Mount Lincoln, 14,375; Macomb's Peak, 13,154; McClellan's Peak, 13,842; Mears Peak, 13,008; Meigs Peak, 13,393; Mesquite Pass, 13,308; Pass Peak, 13,092; Red Cloud Peak, 14,093; Red Mountain, 13,333; Rosalie Peak, 14,236; Simpson's, 14,056; Spanish Peak (west) 13,718; Stewart's Peak, 14,032; Trinchera Peak, 13,681; Uncompahgre Peak, 14,408; Yellow Peak, 13,618. Long's Peak, Pike's Peak, Mount Yale, and some others of the highest summits in Colorado, are omitted. Mount Whitney, or Fisherman's Peak, in the California Sierra, is set down as 14,448 feet high—the most elevated point named in the table.

HOME STOCK AT THE SAN JOAQUIN FAIR.—Although the stock from beyond the limits of the county was courteously given prominent place at the San Joaquin county fair, readers should not forget that there is also fine stock owned in the county. The *Stockton Independent* says: The show of live stock was perhaps the best ever seen here, and it is gratifying to know that some of the best stock displayed was from this immediate vicinity. S. B. Kingsley's herd of Jersey cattle would show creditably at any fair in the United States. His cow, "Olive 3d," which won the prize at the State fair, and took the first premium at our fair, is probably the finest Jersey cow in the district. H. S. Sargent's herd of Jersey's were all fine specimens of that breed. His bull "Keystone 2d," which took the first premium, is from the famous herd of Mr. Mailliard, of Marin county, and descended directly from imported stock. Mr. E. P. Stowe, of this county, showed several fine animals in the Jersey line of blood.

HARVESTING WITH ELECTRIC LIGHT.—We know of cases in which harvesting machinery has been run in the San Joaquin valley with hoodlights, this season. The French have an improvement. A novel use has been made at the trials of agricultural implements at Petit Bourg, France, with the electric light in harvesting. The *Revue Industrielle* says that the conditions for good work were so well fulfilled that the light made it possible to harvest at a distance of more than 1,000 feet from its source. The apparatus was designed by Albarat. The lamp is attached to a high scaffolding on one end of the platform of a portable boiler and engine, the latter serving to run a Gramme electric machine.

The important news topic of the week is the assembling of the Constitutional Convention in Sacramento. Thus far the contest of organization has occupied the attention of the delegates, and the election of Col. J. P. Hoge, president, by a majority of one vote, shows a pretty even balance of opinion upon one point at least. A good choice was made for secretary in the person of J. A. Johnson, editor of the *Oakland Times*. We trust the Convention will proceed forthwith to business, for their time is short.

COMMERCIAL HOTEL, STOCKTON.—Visitors at the San Joaquin county fair who stopped at the Commercial Hotel on Main street found themselves well cared for, wholesomely fed and cleanly bedded. Visitors to Stockton should note this fact.

A NEAT LODGING HOUSE IN STOCKTON.—The Mansion house, corner Hunter and Weber avenue, Stockton, is a good place to put up for a day or a month. The Mansion house is owned by Mrs. M. A. Holden, an estimable lady, and her establishment is praiseworthy.

Woodward's Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a box-constructor have just been added. New stars are constantly engaged for the Pavilion exercises. Rates of admission as usual.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

WEEK ENDING SEPTEMBER 17TH, 1878.

HOT AIR GRATES.—Adna H. Buckhout, Oakland, Cal.
WEEDERS.—Kenneth P. Grant, San Buenaventura, Cal.
TENT POLES.—Harry C. Cushing, S. F.
UNLOADING NETS.—Oscar Marshall, Stockton, Cal.
CAR TRUCKS.—George Vincent, Stockton, Cal.
TRADEMARKS.—Alexander E. Mintie, San Francisco, Cal., medicinal preparation.

"Boss Pruner."

EDITORS PRESS:—Each year an additional new invention in pruning shears marks the progress of events. With it new ideas are framed, planned or matured. Thus the genius of enterprise adds new laurels to the hitherto works of art before the public gaze.

The old style of hand curved blade knife clipping shears and saw, which requires great force of muscle to cleave branches or stems, gave way to a pruner of larger dimensions with an elongated handle, requiring less force with time-saving. With this new addition for the mind to work and improve, the brain has been active. Yankee ingenuity and bred-born genius has eclipsed all former rivals and produced the "Boss Pruner," working on a different plan, allowing the construction to take place of manual labor to a great extent, and saving of time. It retains the elongated handles, and the blade or knife is chisel shaped. To one handle of the tool is an immovable blade made of the best spring steel, which at the end forms a semi-curve bill. The back of the blade is bent, forming a groove in which this chisel blade plays; it being toothed, is worked by a cog-wheel attached to the other handle. The two parts are strongly fastened by a pinion. The opening and closing of the arms causes the knife to move backward and forward in an upward and downward movement. The beauty of it is its great leverage. In the use of the clog lies the saving power of strength. Clipping of branches from one to three inches is but child play; the ease is remarkable. More one uses them, better are they liked, and once in possession, double their expense would not take the place of them.

There are two sizes, for lesser or larger branches. These pruners have just been received by Mr. Geo. Larkin, at Newcastle, Placer county, being invented by a brother-in-law, Mr. Ezra Hickson, of Lucas county, Iowa. It was patented June 8th, 1878. Mr. Larkin has the sole right for its manufacture and sale in this State. Having tried them to our satisfaction, we can recommend them to be superior to any pruner either for orchard or vineyard use, and excels all previous inventions ever made public. Letters of information can be addressed to Geo. Larkin, Newcastle, Placer Co., Cal. Geo. Ricu.

The California Sack Holder.

Among the many new inventions and labor-saving contrivances that have been introduced to the public, there is none that recommends itself so fully and readily as the California sack holder. By its use the labor of one man is saved, and the sacking of grain instead of being the tiresome "back-breaking" work as heretofore, becomes light and agreeable. In fact a boy can operate it as well as a man. The sackholder, like most of the more useful inventions, is very simple in its construction, and it is next to impossible to get it out of order. It is light, weighing but about 17 pounds, and will last though constantly used for years. It is adjustable to any sized sack, and allows no wastage whatever. We consider that it is one of the most useful California inventions we have seen. The patentees deserve to realize the handsome profit we predict for them, and we feel warranted in making the prediction from the large number of people who nightly examine its practical workings at the Mechanics' Pavilion, and the great number of orders the agents are receiving.

NEW MUSIC.—Oliver Ditson & Co., the noted Boston music publishers, send us the following pieces: The very pretty "Maiden's Flower Song," by Pinsuti, and "Maiden May," by Gatty, both charming songs. Then there is a comic quartet, "Caw! Caw!" as sung by the Crow family, which transports one to the farmer's field. For the piano, we are favored with the "Domino Grand Waltz," by Carl Bohm; one of half a dozen fine pieces, "Minnesota March," by Carrie Varney, and a very "Irrepressible Polka," by Johnston. A Mr. Allen also contributes a new quartet arrangement of the "Star-Spangled Banner."

POPULAR MUSIC.—Make your homes merry and popula with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. The *RURAL PRESS* can offer to introduce you there.

SETTLERS and others wishing good farming lauds for sure crops, are referred to Mr. Edward Frisbie, of Anderson, Shasta County, Cal., who has some 15,000 acres for sale in the Upper Sacramento valley. His advertisement appears from time to time in this paper.

A COMMENDABLE ENTERPRISE IN SAN JOSE.—Bro. Herring, late of the *Agriculturist*, has charge of the Union Free Reading Room, San Jose. He is endeavoring to establish the institution upon an enduring basis for the benefit of all.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, October 2d, 1878.

Another quiet week has passed. In Grain, prices have been almost stationary, and trade of only moderate dimensions. Foreign rates have been unusually monotonous, as appears in the following table:

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday...	9s	9d@10s	—	10s	—@10s	4d
Friday.....	9s	9d@10s	—	10s	—@10s	4d
Saturday....	9s	9d@10s	—	10s	—@10s	4d
Sunday.....	9s	9d@10s	—	10s	—@10s	4d
Monday.....	9s	9d@10s	—	10s	—@10s	4d
Tuesday....	9s	9d@10s	—	10s	—@10s	4d
Wednesday..	9s	9d@10s	—	10s	—@10s	4d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1876.....	9s	8d@9s	11d	9s	11d@10s	1d
1877.....	12s	6d@12s	10d	12s	9d@13s	—
1878.....	9s	9d@10s	—	10s	—@10s	4d

The Foreign Review.

LONDON, October 1.—The *Mark Lane Express* says: The bulk of the cereal crop has been satisfactorily secured. The Provincial markets have been liberally supplied with new Wheat, but all samples are in bad condition. Foreign Wheat is also arriving freely. A weakness has been manifest in all branches of trade, and prices have been in buyers' favor. Millers have taken little or no advantage of the low rates ruling, although it was considered in some instances that they abstained with reluctance, in the hope of a still greater decline, which does not appear unlikely now that the supply has so far outstripped the demand, and America continues to ship continuously. Unless support is afforded from political or other sources, there can be little chance of prices rallying for some time. Meanwhile, speculation is a blank, and after so lengthened a downward course, every shilling decline quoted tends to further discouragement and shaking of credit. Maize, Oats and Barley were rather cheaper at the beginning of the week, and no improvement has taken place since. With moderate arrivals at ports of call, the floating cargo trade has been very quiet, and despite some demand for the continent, prices declined about six pence for American. Maize and Barley are dull, and about six pence lower.

Freights and Charters.

The *Call* says: The recent large accession to the fleet of vessels seeking engagements has put the freight market in even a worse condition than it was before, and 40s is just now a top figure as an offer for a grain cargo to Liverpool. The unengaged vessels now number 59, embracing 78,976 tons; engaged for Wheat, 40,653; engaged for merchandise, 10,641 tons.

Eastern Grain Markets.

NEW YORK, September 30.—The French demand for Wheat, though smaller than along back, holds out surprisingly, and there is also a fair inquiry from other parts of the Continent. As a consequence of good prospects for marketing our surplus abroad, and a decrease of receipts from the West by reason of the fall work of farmers, prices of Wheat have not responded to the decline of the other side. Winter Wheat is a trifle lower than this day week, but Spring is scarce and firm—most of incoming supply having been sold weeks ago, and is being turned over on contract as fast as it arrives. The week's sales reach quite 3,000,000 bushels—Spring ranging all the way from 88c. to \$1.06; red Winter, 95c. to \$1.08, and white Winter, \$1.05 to \$1.15. The Corn crop, having escaped frosts, will be enormous, and prices tend downward, closing at 48@50c. for export grades. Malting Barley has sold at \$1.10@1.37, as to quality. Rye, 59@65c. Export Flour, \$3@3.50.

CHICAGO, September 28.—The Wheat market during the past week has been rather quiet. Cash was quoted to-day at 88c.; seller September, 87@88c.; under October, ranging at 87@88c.; seller October, 88@89c. Receipts during the past week, 787,000 bushels, against over a million bushels for the same week last year. Shipments, 720,000 bushels, against 638,000 for the same week last year. In Corn there has been a moderate business transacted during the week, but a very steady feeling prevailed. Cash Corn sold to-day for 35@35c.; gilt edge, 35c., and high mixed about the same figure. For future delivery the market was steady—September, 35c.; October, 35c.; November, 36c.; December, 36c., and May, 37c.

Eastern Wool Markets.

BOSTON, September 28.—The movement in Wool during the past week was decidedly more encouraging. The number of buyers was large, and sales indicate a more active market than for many weeks. There was no improvement in prices, but a better feeling prevails. It is generally believed the lowest point has been reached for the present. Fleeces have attracted considerable attention, and upwards of 500,000 pounds were sold. Sales include 311,000 pounds of

Ohio, at 35@39c. for medium X, XX and above, including some considerable lots of X and XX fleeces, at 65@66c. Michigan and Wisconsin fleeces sold to the extent of 143,000 lbs, chiefly at 32@32c., with indications of a more active and firmer market. Combing and delaine fleeces continue to meet with steady demand at previous prices. Sales of the week are 62,000 pounds, at 32@42c. for washed and 30c. for unwashed. Good medium delaine and combing are selling principally at 42@42c., and fine delaine at 27@40c. Trade in California Wool amounted to 201,000 pounds at 17@28c. for Spring, and 80,000 pounds new and low. Fall at 14@15c. Other sales include New York fleeces at 30@31c. for mediums; Maine, 36c.; Texas, 19@27c.; Georgia, 28c.; Territory, 13@24c.; Oregon, 25@30c.; super and X pulled, 25@30c. Total sales of domestic Wool for the week, 1,556,000 pounds.

NEW YORK, September 30.—Notwithstanding the recent firm assertion of Wool holders relative to future prices of fleeces, it is found that during the past few days an easier feeling has manifested itself, and some are ready and willing to meet the views of buyers. Manufacturers are still running on rough-faced goods that require medium grades of Wool, and thus in the meantime fine grades suffer. A good No. 1 Ohio will, to-day, command 37c., and in some cases 37c., but the supply is gradually growing less, and when the stock is exhausted buyers will turn their attention to other grades, but not to fine, so long as the trade calls for medium goods. California and Texas sympathize more or less with Fleeces, and concessions, in many cases, are easily obtained. Pulled Wools are scarce and wanted, particularly short extra, for hatters' purposes. Carpet Wools continue dull and weak. The sales for the week include 200 bales Donskoi, at 24@26c.; 37,000 lbs Spring California, 21@25c.; 5,000 lbs scoured do, 55c.; 10,000 lbs Mexican, 14c.; 4,000 lbs new burry Fall Texas, 16c.; 19,000 lbs Western do, 20@24c.; 50,000 lbs X, XX and above Ohio, 36@37c.; 5,000 lbs fine unwashed do, 24c.; 3,000 lbs unmerchantable do, 26c.; 30,000 lbs combing and delaine, 40@45c.; 5,000 lbs Western fleece, 32@33c.; 23,000 lbs super pulled, 30@36c.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Sept. 11.	WEEK Sept. 18.	WEEK Sept. 25.	WEEK Oct. 2.
Flour, quartersacks....	67,152	75,841	40,235	40,795
Wheat, centals.....	572,818	633,024	350,228	267,013
Barley, centals.....	48,962	71,424	77,051	61,600
Beans, sacks.....	1,149	2,106	6,259	8,629
Corn, centals.....	1,999	2,410	3,388	1,019
Oats, centals.....	2,352	7,415	19,401	16,271
Potatoes, sacks.....	10,683	11,845	20,214	17,831
Onions, sacks.....	1,011	890	571	1,621
Wool, bales.....	2,379	4,554	4,373	6,305
Hops, bales.....	485	618	902	854
Hay, bales.....	1,946	1,787	1,705	2,087

BAGS.—The advance made by the ring last week is still adhered to, and 14@14c. are the rates for standard Wheat Bags.

BARLEY.—The demand centers on Brewing, which is in small receipts. Feed is dull. We note sales: 700 bags Bay Brewing sold at \$1.20; 1,500 do at \$1.21, and 600 at \$1.22; 150 Bay Feed at \$1; 500 at 95c. per ctl.

BEANS AND PEAS.—Receipts of Beans continue heavy, and a farther drop in prices for all kinds is noted. Prices for the different sorts may be found in our tables. Field Peas now sell at a wide range, some bringing as high as \$1.70 per ctl.; 20 sks. "black-eye" sold at \$1.50.

CORN.—Corn is abundant and prices the same as last week.

DAIRY PRODUCE.—Strictly fresh Butter is scarce and a sharp demand for it has advanced prices 5@7c. per lb. Cheese is unchanged.

EGGS.—Fresh Eggs are still scarce and the late advance is maintained.

FEED.—Choice Wheat Hay will stand an advance of 50c. per ton, and is in demand. Other grades are quiet and perhaps a shade higher.

FRESH MEAT.—The market is a shade lower this week on nearly all kinds of meat. To-day's prices may be found below.

DRIED FRUIT.—A dispatch from New York says: For foreign Dried Fruit the demand steadily increases, and prices of all goods, excepting new Valencia Raisins and old Turkish Prunes, have a firm support. Those named are quoted at 6@6c., respectively. The new crop of Figs has commenced to arrive, but samples are not as yet before the public.

FRUIT.—Apples have improved a little, as fine winter Fruit is now coming in. Pears, Plums, Prunes, and Berries are advancing owing to the decline of supplies.

HOPS.—This market is at a standstill, because prices are not satisfactory to growers. We hear of sales of 125 bales California grown at 12c. per lb. The high rates paid in Mendocino early in the harvest do not seem to have been warranted, and it is reported that the party which paid the large price and contracted more at high rates has backed out of his contracts. This is the rumor on the street. In New York, Hops are dull. Emmet Wells, in his circular of September 20th, says: "The American crop is now secured. The yield, in our opinion, is 150,000 bales, which is 60% below that of last year. The yield last year was 250,000 bales, disposed of as follows: Shipped to foreign ports, 100,000 bales; used at home, 110,000; in hands of brewers, 30,000; in hands of dealers and growers, 10,000; total, 250,000 bales. If our consumption is the same this year as last, we shall

have a surplus of 40,000 bales; but it is not likely we shall ship as many as 40,000 bales unless foreigners will take in a few rusty and moldy Hops. The proportion of choice Hops will be very small, probably not over one-eighth of the crop; or, say 18,000 to 20,000 bales. The price to-day in this market is 10c to 15c; a very choice Hop, if here, might bring a little more money.

LIVE STOCK—We note the following sales: One thousand Sheep at \$2.25; 700 Cattle at \$20 each; 3,000 Hogs at 4 1/4 c per lb, silver; 220 Milk Calves at \$8 at head; 1,000 Lambs at \$1.10 each.

OATS—Oats are abundant and sales rather small; some are being exported. We note sales: 140 bags good California feed at \$1.40; 97 do good Coast at \$1.35; 40 do fair at \$1.25, and 100 do poor at \$1.22 1/2 per ctn.

ONIONS—Onions have receded rapidly from the mark established a week ago. All good onions are selling to-day at \$1.62 1/2 @ \$1.75.

POTATOES—Potatoes have shaded down a little. Sweet potatoes advanced to \$1.25 per ctn for good lots.

PROVISIONS—There is no change except a slight reduction in Smoked Beef.

POULTRY—Prices are without material change.

VEGETABLES—String Beans, Green Peas, Horseradish, Summer Squashes and Tomatoes have all stepped upward a little as the season is advancing.

WHEAT—Shipping Wheat to-day does not receive a higher quotation than \$1.65, and sales are few. We note sales: 4,500 ctns good Shipping, alongside, at \$1.65; 220 do good Milling at \$1.65; 8,000 do good Shipping at \$1.62 1/2; 2,000 Walla Walla at \$1.60; a good round lot of Shipping, indirectly reported, at \$1.63 1/2; 700 and 419, and other small lots choice Milling, at \$1.67 1/2 per ctn.

WOOL—The trade is very dull and transactions comparatively small. Our quotations cover the market so far as sales go but are somewhat nominal. We note sales of 10,000 lbs Northern free at 13 @ 14c; 50,000 lbs various grades at 12 @ 16c.

DOMESTIC PRODUCE.

(WHOLESALE.)

WEDNESDAY M., October 2, 1878.

BEANS & PEAS.		ONIONS.	
Mayo, ctns.	2 25 @ 25	Almonds, hd sh lb	7 @ 8
Butter.	2 50 @ 50	Soft sh lb	14 @ 16
Peas.	2 00 @ 3	Brazil.	14 @ 16
Red.	2 00 @ 20	Pecans.	13 @ 14
Pink.	2 00 @ 25	Peanuts.	5 @ 6
Sm't White.	2 00 @ 25	Filberts.	15 @ 16
Lima.	2 00 @ 25		
Field Peas.	1 12 @ 70		
BROOK CORN.		POTATOES.	
Old.	3 1/2 @ 7	Petaluma, ctns.	1 00 @ 25
New.	4 1/2 @ 8	Humboldt.	1 00 @ 25
CHICORY.		Cuffey Cove.	1 25 @ 25
California.	4 @ 4 1/2	Early Rose.	7 1/2 @ 25
German.	5 1/2 @ 7	Half Moon Bay.	1 00 @ 25

DAIRY PRODUCE, ETC.		POULTRY & GAME.	
Cal. Fresh Roll, lb	35 @ 40	Hens, doz.	6 00 @ 7 00
Packery Brands.	40 @ 42 1/2	Roosters.	4 50 @ 6 00
Pickled Roll, new.	25 @ 27 1/2	Broilers.	3 50 @ 4 50
Firkin, new.	21 @ 25	Ducks, tame.	6 00 @ 7 50
Western.	14 @ 16	do, Mallard.	4 00 @ 4 50
New York.	— @ —	Geese, pair.	2 00 @ 2 50
OTHERS.		Wild Gray, doz.	— @ —
Cheese, Cal, lb.	8 @ 12 1/2	White do.	— @ —
Eastern.	8 @ 11	Turkeys.	20 @ 23
N. Y. State.	— @ —	do, Dressed.	— @ —
Gilroy Factory.	11 @ 13	Snipe, Eng.	3 00 @ 4
EGGS.		do, Common.	50 @ 75
Cal. fresh, doz.	37 1/2 @ 40	Quail, doz.	1 00 @ 1 25
Ducks.	30 @ 32 1/2	Rabbits.	1 50 @ 2
Oregon.	30 @ 32 1/2	Hares.	3 00 @ 3 50
Eastern.	30 @ 32 1/2	Venison, lb.	7 @ 8
do by express.	30 @ 32 1/2		
Pickled here.	27 1/2 @ 30		

FEED.		PROVISIONS.	
Brant, ton.	— @ 16 00	Cal. Bacon, Hvy, lb	11 1/2 @ 12
Corn Meal.	40 00 @ 45	Medium.	12 @ 12 1/2
Hay.	7 00 @ 14 50	Light.	13 @ 13 1/2
Middlings.	22 00 @ 24 00	Lard.	11 @ 13
Oil Cake Meal.	34 00 @ 40	Cal. Smoked Beef	9 1/2 @ 10
Straw, bale.	25 @ 60	Shoulders, Covered	7 1/2 @ 8 1/2
FLOUR.		Hams, Cal.	12 1/2 @ 13 1/2
Extra, bbl.	5 00 @ 65 50	Dupe's.	17 @ 17 1/2
Superfine.	4 25 @ 45 50	None Such.	— @ —
Graham, lb.	3 @ 3 1/2	Ames.	— @ —
FRESH MEAT.		Whittager.	— @ —
Beef, 1st quality, lb	5 @ 6	Magnolia.	17 @ 18
Second.	3 1/2 @ 4 1/2	Reliable.	17 @ 13
Third.	3 @ 3 1/2		
Mutton.	3 1/2 @ 4		
Spring Lamb.	5 @ 6		
Pork, undressed.	4 1/2 @ 4 1/2		
Dressed.	4 1/2 @ 4 1/2		
Veal.	5 @ 7		
Milk Calves.	7 @ 7 1/2		
do choice.	7 1/2 @ 8		

GRAIN, ETC.		SEEDS.	
Barley, feed, ctn.	90 @ 105	Alfalfa.	5 @ 12
Brewing.	1 15 @ 25	Canary.	4 @ 4 1/2
Chevalier.	1 15 @ 25	Clover, Red.	15 @ 16
Buckwheat.	1 50 @ 1	White.	50 @ 55
Corn, White.	1 10 @ 15	Cotton.	6 @ 10
Yellow.	1 10 @ 15	Flaxseed.	3 @ 3 1/2
Small Round.	1 12 1/2 @ 17	Hemp.	6 @ 6
Oats.	5 @ 5 1/2	Italian Rye Grass	35 @ —
Milling.	5 55 @ 60	Perennial.	35 @ —
Rye.	1 27 1/2 @ 30	Millet.	10 @ 12
Wheat, Shipping.	1 62 1/2 @ 70	Mustard, White.	2 1/2 @ 3 1/2
Milling.	1 67 1/2 @ 70	Brown.	18 @ 2
Off Grades.	1 40 @ 60	Mustard, Black.	2 @ 2 1/2
HIDES.		Light Brown.	8 @ 9 1/2
Hides, dry.	16 @ 16 1/2	Green.	23 @ 35
Wet salted.	7 @ 9	Wines, Old Port.	3 50 @ 5 00
HONEY, ETC.		French Claret.	1 00 @ 2 50
Beeswax, lb.	30 @ 31	Cal. doz hot.	3 00 @ 4 50
Honey in comb.	11 1/2 @ 13	Whisky, O. K. gal.	3 50 @ 5 00
do, No 2.	8 @ 9	French Brandy.	4 00 @ 5 00
Dark.	8 @ 9		
Strained.	5 @ 5 1/2		

HOPS.		TAILOR.	
Oregon.	— @ —	San Joaquin, free.	10 @ 12 1/2
California.	10 @ 12 1/2	South Coast, do.	10 @ 12 1/2
Wash. Ter.	10 @ 12 1/2	Sac. and Northern.	13 @ 15
Oil Hops.	3 @ 5	Mendocino & Humboldt.	16 @ 17
NUTS—Jobbing.		Southern, burry.	9 @ 11
Walnuts, Cal.	8 @ 9	Northern, do.	11 @ 12
do Chile.	7 @ 8		

GOLD, LEGAL TENDERS, ETC		Wool, ETC.	
Gold in New York.	100 @ 100	San Joaquin, free.	10 @ 12 1/2
Gold Bars, \$20 @ \$100.	SILVER BARS, 8 @ 15 @ cent. dis.	South Coast, do.	10 @ 12 1/2
EXCHANGE on New York.	1 1/2; on London bankers.	Sac. and Northern.	13 @ 15
49 1/2; Commercial, 50; Paris, 1/2 francs @ dollar; Mexican dollars, 83 @ 91.		Mendocino & Humboldt.	16 @ 17
LONDON CONSOLS, 94 13-16; Bonds, 108 1/2.		Southern, burry.	9 @ 11
QUICKSILVER in S. F., by the flask, 1/2 lb, 41 @ 41 1/2.		Northern, do.	11 @ 12

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LONDON CONSOLS, 94 13-16; Bonds, 108 1/2.		Southern, burry.	9 @ 11
QUICKSILVER in S. F., by the flask, 1/2 lb, 41 @ 41 1/2.		Northern, do.	11 @ 12

GOLD, LEGAL TENDERS, ETC		Wool, ETC.	
Gold in New York.	100 @ 100	San Joaquin, free.	10 @ 12 1/2
Gold Bars, \$20 @ \$100.	SILVER BARS, 8 @ 15 @ cent. dis.	South Coast, do.	10 @ 12 1/2
EXCHANGE on New York.	1 1/2; on London bankers.	Sac. and Northern.	13 @ 15
49 1/2; Commercial, 50; Paris, 1/2 francs @ dollar; Mexican dollars, 83 @ 91.		Mendocino & Humboldt.	16 @ 17
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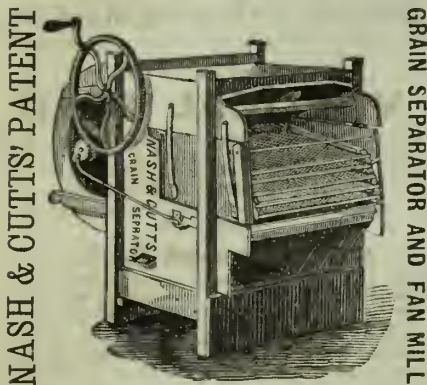
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Yellow.....	—	@ 1 10	Mustard, White...	2 1/2 @	3 1/2
Small Round....	1 12 1/2	@ 1 17	Brown.....	1 1/2 @	2
Oats.....	1 25	@ 1 52 1/2	Rape.....	2 1/2 @	5

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THREE SIZES—Warranted to Clean from 60 to 200 bushels per hour, perfectly.

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WINDMILLS,

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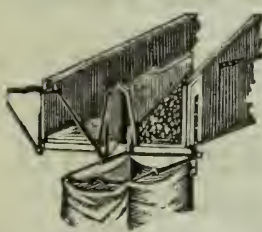
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Shake Them Down.

HOW? USE THE

"CALIFORNIA SACKHOLDER."

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Adjustable to any Sized Bag.

LONG,

SHORT,

WIDE,

Or Narrow.

Completest Device Ever Invented and Lasts a Lifetime.

Discount to the trade. General Agency for the Pacific Coast,

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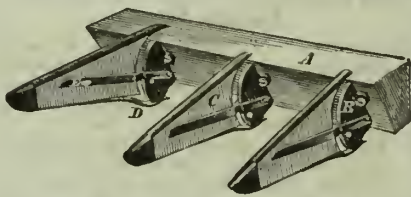
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All farmers who wish to save grain without waste in cutting, should examine these. They can be run at any inclination to the ground, as seen at D in cut. Are light, strong and durable, and can be adjusted in 15 minutes, or removed in five when not required, by drawing bolt in malleable shank B. Set of 8 for 10-foot header, (in putting on which bore with 1/4-inch bit for lag screws) are the cheapest and give the best satisfaction of any in use. Parties can save additional cost of a set in one day's cutting, where grain is lodged or trinkles down. Price, \$40. Also, Grain Belts, Header Sticks, etc. Manufactured for

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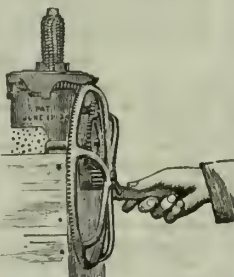
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It is so cheap (costing only \$8), that almost any one can afford to buy one. It is so rapid, it will shell almost as fast as a \$40 machine, and seven or eight bushels per hour is not above its capacity. It weighs only 13 pounds and is simple and durable. For particulars, address

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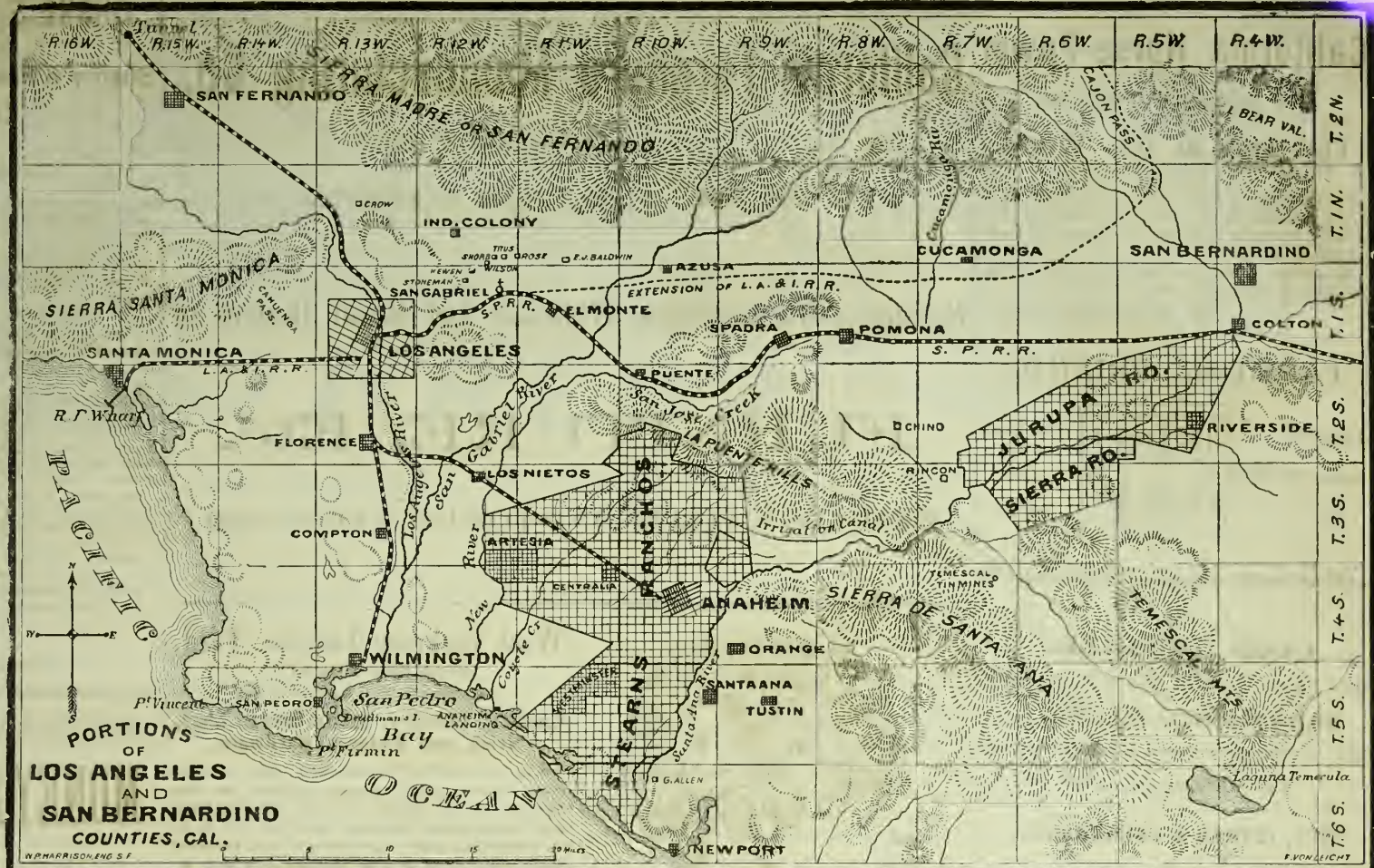
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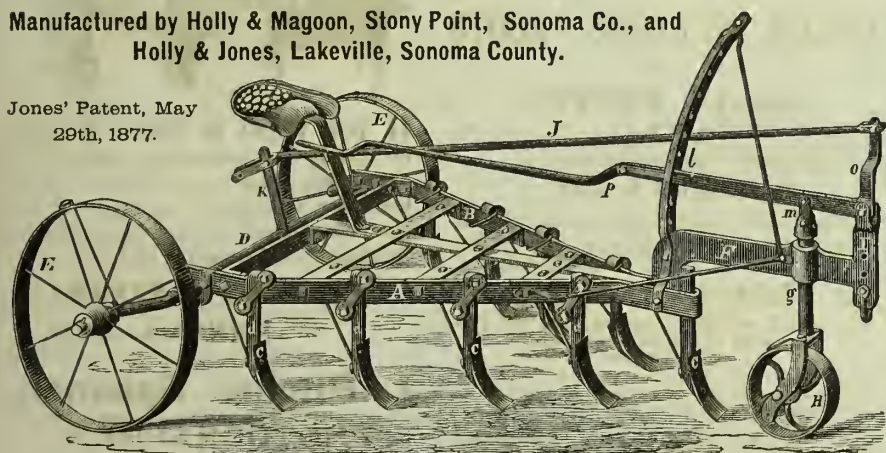
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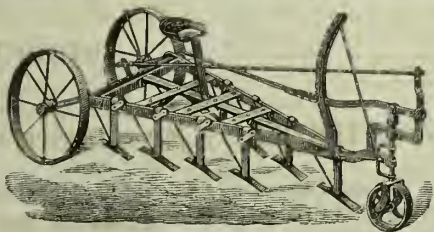
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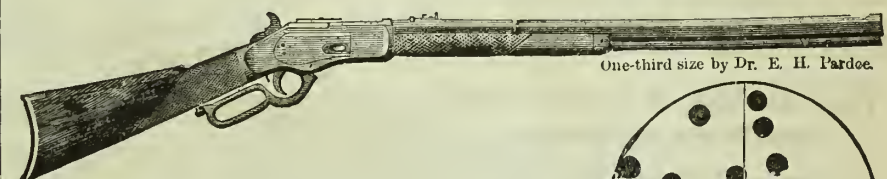
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The Rapidity of its Fire,

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The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

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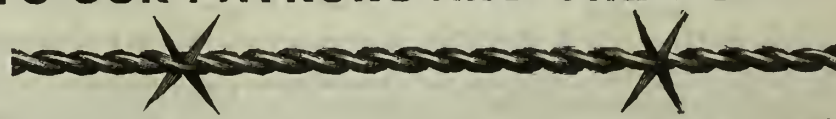
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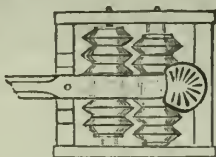
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PACIFIC RURAL PRESS

Volume XVI.]

SAN FRANCISCO, SATURDAY, OCTOBER 12, 1878.

Number 15.

A Fine Cotswold Ram.

In our issue of August 24th we gave an engraving of a group of fine Cotswold ewe lambs from the flock of T. L. Miller, of Beecher, Illinois, a leading breeder of these sheep. We now complete the portraiture of the breed with an engraving of a fine ram bred by the same gentleman. This splendid animal rejoices in the name "Standard," and we are assured by those who have seen the original that the likeness which we present is accurate.

The Cotswolds have made their fame wider in this State at this year's fairs through the exhibits of George M. McCracken, T. A. Scott, and others, and the adaptation of the breed for certain purposes in this State, as we pointed out in our issue of August 24th, will doubtless lead to their dissemination among those who are located, so as to handle them properly and profitably.

The English breed of sheep are now attracting more than usual attention in the Eastern States, and this is especially true of the Cotswolds. England has given more attention to the production of meat than any other country, both as regards quality and cost of production. For mutton the Cotswold stands next to the Southdown, and when considered both for mutton and wool is claimed to be without a superior. The ewes are usually turned to the butcher inside of five years

old, and weigh from 250 to 350 pounds each. The wethers go usually as yearlings, and often weigh nearly the same. As we stated before, such heavy sheep would not do as well in our markets as in colder climates; but so long as the animal has the power to put on flesh quickly, and consequently cheaply, it will not be difficult to handle this power so as to reach the best results under local conditions. In England the largest sales of Cotswolds are made as lambs, from 8 to 12 months old, and weigh from 150 to 200 pounds each. These weights are reached by the average farmers of England, and when the care is given by the American farmer to sheep breeding as is given by the English farmer, similar results may be had.

In sheep husbandry, as in other lines of live stock growing, there are points to be made by securing blood which is bred for the purposes desired, and which has its power concentrated to these ends. It is just as unprofitable to

work with a poor animal as with a dull tool. Time and material are both wasted, and the result gained in the end is not commensurate with the effort.

The Fairs.

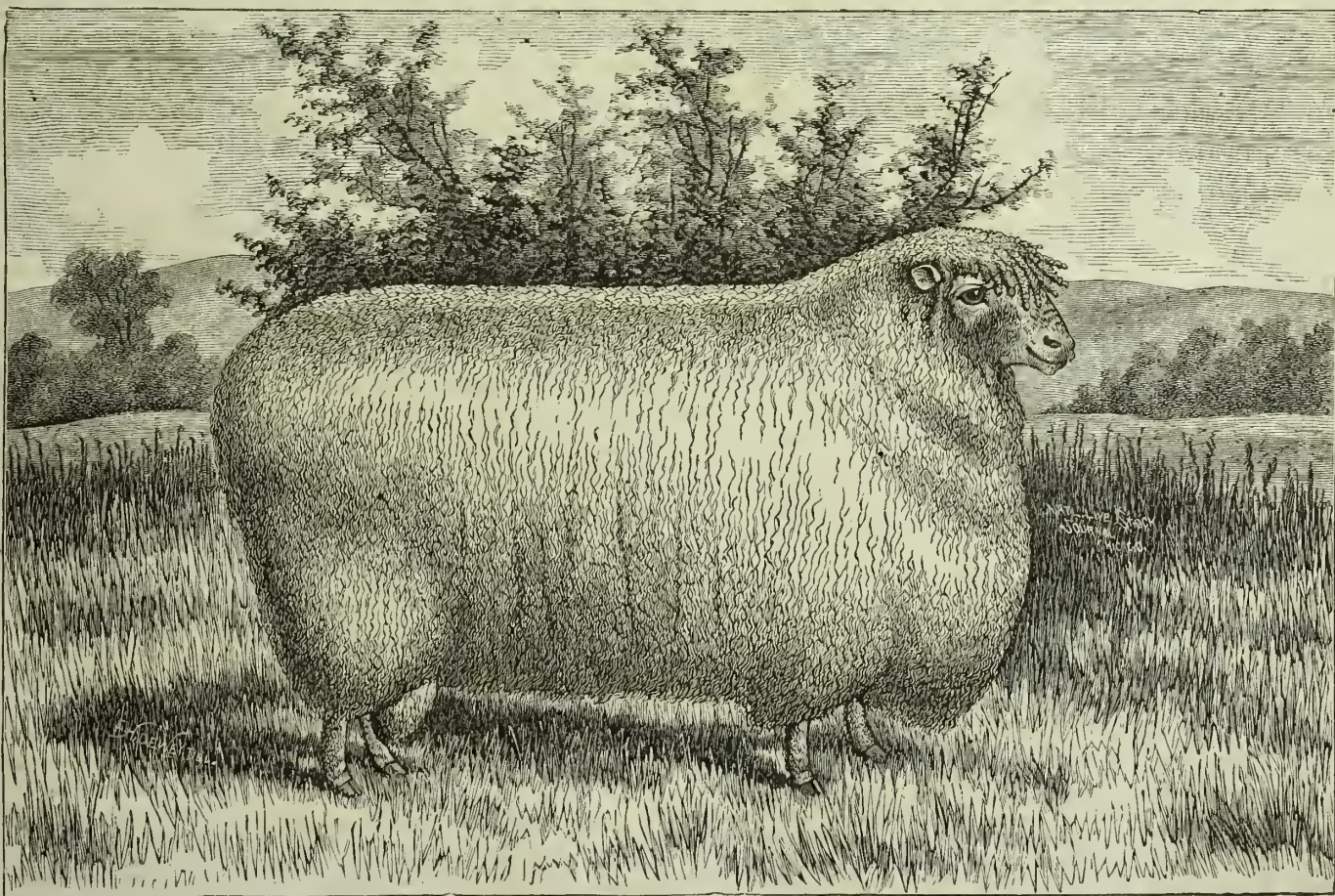
The fairs continue with general success. Last week there were several: The Northern district at Marysville, of which a list of premiums may be found elsewhere; the Santa Clara fair at San Jose, of which we withhold notice because a copy of the premium list has not yet arrived; the Upper Sacramento fair at Chico is well spoken of; and at the Siskiyou county fair

The Planting Season.

A few weeks will probably bring us to the seed sowing and transplanting season in California. As soon as the rains have fairly begun, and this occurs sometimes in November, and sometimes later, we enter upon a prolonged period, during which seeds may be successfully sown, as our seeding time varies with different plants, and different parts of the States from the first rains in the fall until the regular Eastern spring draws near. Thus we have a very long planting season, for a California winter is little more than a prolonged spring, attended by ver-

advertising patrons send on their announcements as the autumn draws nigh. Many of these advertisers we know to be among the most trustworthy of Eastern propagators, and their experience in the use of our columns may be taken by all seed and plant growers as surety of the advantage it is to them to announce the valuable things they may bring forward and make their name and business known in a community which is growing rapidly, and is wide awake to charge the soil with the growth of everything which promises well.

Although we have given Eastern seedsmen and nursery men the courtesy of prior mention, we are not unmindful of the praiseworthy work which is being done by our local laborers in these lines of production. Some of them are making commendable efforts to supply the large demand of California planters with desirable growths, and we are glad to know that their business is increasing. They labor under some disadvantages which should make more honorable the success which they do attain. We know that our people are disposed to favor them, and when they make their deeds known in our columns and furnish our readers with articles true to their representations, they build up business correspondence which is greatly to their advantage. This has been the experience of our leading California propagators.



COTSWOLD RAM, "STANDARD," OWNED BY T. L. MILLER, BEECHER, ILL.

was shown the gratifying progress which our northern friends are making in agricultural arts. This week the Monterey county fair at Salinas, the Stanislaus county fair at Modesto, and the Nevada State exhibition at Reno, are gathering large concourses. Of these exhibitions we shall doubtless have notes in future issues. Next week the great display of the Southern California Horticultural Society will be held at Los Angeles. Great preparation has been made to adequately represent the matchless productions of our Southern counties, and large delegations of visitors will be present from nearly all parts of the State.

THE MONTEREY FAIR. — We received just too late for acknowledgement in last week's PRESS, a copy of the list of premiums awarded at this year's fair of the Monterey Fair Association, and a complimentary card of admission. The fair is in progress as we write, and we hope that these bright days are bringing a full attendance of visitors and a large variety of exhibits.

nal warmth and verdure. As with seeds so with plants, trees and shrubs for transplanting. As soon as the rains come we enter upon a period of several months, during which the forest, orchard or garden planter may look about him for desirable growths.

California farmers, orchardists and gardeners are wide awake to secure a trial on their grounds of everything which is found desirable anywhere. The new varieties of trees, plants and seeds which are brought in by mail from Eastern nursery and seed growing establishments, embrace nearly everything which is announced as promising. We hear nearly every day of something being localized from the wealth of novelties or standard varieties which Eastern propagators make public. It is true that some of the introductions do not prove valuable under our conditions, but so much is gained on the whole that all experimenters are ready to continue their tests. This fact may be seen in the readiness with which our Eastern

There is every probability that the coming planting season will be one of unusual activity throughout our State. The abundant rains of last winter have so moistened the lower strata of the soil that a moderate amount this year will ensure successful growth. This harvest's abundance will bring a good measure of coin to our farmers' pockets, and there will be a general disposition to plant trees, shrubs and seeds, both for utility and adornment. We look for a time of unusual activity in this respect, and consequently the demand will be great for material to entrust to the soil. This is a gratifying prospect, for the effort to diversify production by the introduction of valuable large and small fruits, vegetables and cereal plants, is one which promises general prosperity, and the movement toward covering unoccupied spaces with growths, whether they be for fuel or timber, for shade or for the increase of the natural beauties of our favored State, is one which has both practical and esthetic excellence.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Carson City, Nevada.—No. 1.

[From our Traveling Correspondent.]

This is, perhaps, the most beautiful and homelike town in the State of Nevada, and the next in size and population to Virginia City. It is situated in the upper portion of Eagle valley, and west from the Carson river about three miles. Carson City is the capital of the State of Nevada, also the county seat of Ormsby county. It contains a population of about 5,000. According to the Assessors books, the real estate within the city limits, is valued at \$1,281,039. The city is well laid out. The streets are wide, level, clean and straight, and kept in good condition. The drainage is good. Shade trees and fruit trees and flowers abound. There are several excellent hotels, all kinds of mercantile houses in abundance, churches, school houses and theaters in numbers equal to the wants of a refined and intelligent population. Carson's railroad and stage connections make it an embarking point for a large portion of Nevada, as well as for many of the mining towns of Alpine and Mono counties, California. It is on the line of the Virginia and Truckee railroad, 30 miles from Reno, and 22 miles from Virginia City. Here is the terminus of the sleeping cars connected with the lightning express trains of this road. A daily stage leaves every afternoon for Genoa, south and distant from Carson 14 miles, where connection is made with another line of stages for Monitor, Silver mountain, Markleville and other points in Alpine county, California. A six-horse coach leaves Carson every morning upon the arrival of the passenger train from the West, for Aurora, via Genoa, distant 105 miles, and for Bodie about 12 miles farther. On the same road is a fast freight line called the Southern Transportation Company, which makes tri-weekly trips, carrying passengers and freight. During the traveling season, which embraces about eight months in the year, a daily six-horse coach is run to Glenbrook, on Lake Tahoe, the "Gem of the Sierras," distant 14 miles. This coach is driven by that celebrated old whip, Hank Monk, who has acquired such a world-wide fame by his drive with Horace Greeley from Carson to Placerville.

The Warm Springs.

These springs are about one mile and a half east of Carson. This property is now owned by Butts & George. The water is very hot, and rushes out in great volume from under or through a quarry of tertiary sandstone. The proprietors have enclosed with this sandstone five swimming baths, each 28 feet square, walls 15 feet high, lighted and ventilated in the roof. The water in the baths, is from four to eight feet deep, and so transparent that a pin can be seen upon the bottom, which, by the way, is a smooth rock. The baths are drawn down every night, scrubbed out and filled with fresh water, as the immense volume from the spring is constantly passing through them. Upon analysis the water was found to contain sulphur, iron, soda and magnesia, and it is claimed that the water taken internally and externally possess remedial properties of great value. One thing I can attest, that it is a most grateful bath, and a great rejuvenator.

The State Prison.

This institution is situated at the Warm springs. The main prison building was built by Abraham Curry, in 1861, and occupied for a hotel, and was the place of meeting for the first Territorial Legislature. The buildings and walls around the prison yard are of sandstone, taken from the quarry upon which the prison is located. There are at present 140 convicts in the institution, of whom 65 are working in the shoe shop, 35 in the yard and quarry, the others being employed as laundrymen, cooks, carpenters, tailors, blacksmiths and waiters. The discipline of the institution is good, and its general management is very satisfactory. The officers at present in charge are General C. C. Batterman, Warden; Captain J. H. Mathewson, Deputy Warden; R. Gomond, Captain of the Guard; D. H. Pine, Lieutenant of the Guard; J. J. Liun, Commissary; Harrison Gray, Book-keeper.

The Mint

Is situated on Carson street, the main business street of the city, and within one block of the railroad depot. The building is a substantial stone structure, erected in 1869, at a cost, including the necessary machinery for the mint, of \$240,000. The officers are: James Crawford, Superintendent; George W. Bryant, Melter and Refiner; Levi Dague, Coiner; W. P. Prescott, Assayer. There are employed, all told, 80 persons, of which 62 are males and 18 females. The coinage for the year ending June 30th, 1878, is as follows: Gold, 54,348 pieces, valued at \$866,680; silver, 9,692,000 pieces, valued at \$2,941,000. The deposits for the same year were in gold, \$737,719.85, and in silver, \$2,447,279.59.

The State Capitol.

This building was erected in 1870, and occupied by the Legislature in 1871. The material used in its construction is the sandstone from the Warm springs quarry, making a very sub-

stantial, solid-looking structure. It is situated in the center of a square, consisting of four blocks on Carson street, enclosed by a splendid iron fence with a stone base. The grounds are tastefully laid out and planted in shade trees. The building is in the form of a Maltese cross, with an entrance at each of the four ends. The executive departments are on the first floor, the legislative chambers, Supreme court rooms, and library are on the second floor. The State library—a special pet of Chief Justice Hawley—and the State mineralogical department, are features of the capitol that the State may well be proud of. The capitol building was erected at a cost of \$175,000; cost of furniture, \$25,000; cost of books and fixtures for State library, \$40,000; cost of fencing and beautifying the grounds, \$25,000. The capitol, with its tasteful and pleasant surroundings, is a just source of pride to the people of Carson and a credit to the State of Nevada.

The Orphans' Home.

Situated on the Warm springs road and within the corporate limits of the town, is a State charity and, as remarked to your correspondent by a citizen, the most noble and best conducted in the State. The building cost \$12,000. There is 15 acres of land in the enclosure, which is chiefly devoted to raising vegetables for use of the inmates of the home. Orphans, as well as half-orphans, whose parents were residents of the State of Nevada, are entitled to its benefits. It is under the control of a State board consisting of the Surveyor-General, State Treasurer, and Superintendent of Public Instruction, who have the entire direction or management of the home, including the appointment of those in immediate charge. The present parties in charge are Geo. B. Webb, Superintendent; Mrs. Geo. B. Webb, Matron; Miss Emma Verrill, Teacher. Number of wards at present in the institution, 65.

The Carson Opera House.

Among the improvements of recent date is the construction of an opera house, which is fully up to the requirements of a first-class theater. It has a seating capacity of 750, and is substantially and tastefully arranged. An elegantly upholstered dress-circle, comfortable orchestra seats, and a parquet are of the appointments. The house is well ventilated and so arranged that it can be emptied in an emergency in about three minutes. The stage is 34 by 48 feet, and provided with a complete set of stock scenes. The cost of this handsome theater is \$15,000. W. G. A.

Uses of Egyptian Corn.

EDITORS PRESS:—I have never spoken highly of this as a forage plant, though many others have done so. The only great value that it possesses for forage, is found in its withstanding our summer drouth and furnishing a vast amount of green stalks, leaves and unripe heads of grain, in autumn, at the time of greatest need here, viz: when the herds of cattle and sheep are driven out of the mountain pastures by the early snows, and have to return to the valley before the feed has been started by the autumn rains. At such times forage is very scarce, and stock will eat almost anything to sustain life, and the Egyptian corn furnishes without care or irrigation, at this time, a vast amount of nutrient, though not very palatable food. I knew nothing of any other forage plant till the present year that would withstand drouth through summer and furnish a great amount of green forage in autumn, but the past year's observation and experiments have proven that Amber cane, Imphee cane, East India millet and New Zealand millet, all remain green throughout the great drouth of our summers, and that they afford forage more palatable to stock than that of the Egyptian corn.

The grain of the Egyptian corn is used just the same as all other grain feed; though most animals at first refuse to eat the brown variety, but I am told that they usually acquire a taste for it by use. The readers of the RURAL will please bear witness that I've not been an advocate of any but the white variety. All stock eat the white with avidity, and do well upon it.

Egyptian Corn Failures.

While dozens of letters attest its perfect success throughout the hot, dry interior of our State, a number equally great, in proportion to the less area planted in the coast counties, speak of its failure or only partial success there. They complain that it does not fill or yield well, and those who speak on that subject at all say that what grain they get is small and flavorless. How this may be I cannot say, but here where fields of it are raised, where the long lines of clustered heads make a crest of white in either direction along the horizon, the flavor of the unripe grain almost equals fresh sweet chestnuts.

W. A. SANDERS.

Kingsburg, Fresno county, Cal.

The Grain in Tuolumne County.

EDITORS PRESS:—I send you a few seeds of Egyptian corn—not quite ripe, in fact this is our first experiment, and knowing nothing of this plant except as it becomes developed. It is very beautiful while growing, with its long drooping head, and branching snekers. I believe it will do well amongst the foothills. Our yellow and white corn attain to a height of ten feet, with exception still higher, planted after a crop of wheat hay was harvested.

JOHN TAYLOR.

Mt. Pleasant, Tuolumne Co., Cal.

On Tramps.

EDITORS PRESS:—One of your correspondents imagines that the "genus tramp" may be finally rooted out. I am afraid that may not be for many generations. The worthy tramp may find employment; but there is a whisky guzzling, constitutional tramp, who will thrive and exist under good and perverse times. For twenty-seven years I have had experience with this hard-living wayfarer. I will give you a sample: Only three days ago, full of business vim, one tramp wished to know if I had a corral for a flock of sheep; he was a sheep herder, employed by Miller & Lux; his sheep would be down from the summer pasture in a few days, and he wanted to secure accommodations for them. He wanted dinner, and would settle when he came down. I measured the man at his real value, but, as I never refuse a hungry man, he had his lunch. One hour from that time he was in Chinese Camp, sampling whisky, as he wished to "purchase one gallon." No, no, you can never get rid, by multiplying labor facilities, such a living sample of the "genus tramp"; but the removal of whisky would be a grand step towards it, and I will second the recommendation of your correspondent: To leave the right of "License or no license" to the people in districts, or even counties, at a general election. Few of our fatal tragedies would take place if whisky were banished. Jails and Police Courts would be of little use; churches and cheerful firesides would feel the impetus. Give us the privilege of voting whisky to the dogs.

JOHN TAYLOR.

Mt. Pleasant, Tuolumne Co., Cal.

Squirrel Poisoning in Santa Cruz.

EDITORS PRESS:—It is but recently that these persistent little pests came into the northern portion of our county, and the question is often asked, why were they not here before? I believe they were kept back, or rather kept down, by the bigger game formerly so plentiful and always raiding upon the squirrels. Eagles, hawks and herons pounced upon them; coyotes, foxes and particularly wild cats, "laid" for them. A single wild cat with a litter of kittens will clear off a 50-acre field in one summer; and I verily believe if the cats could be let alone by the hunters and hunting dogs, they would soon exterminate the whole squirrel tribe from this part of the county.

It may be well to explain that we still have, hereabout, enough timber and brush land to afford ample cover for "wild beasts"—from cats up to grizzlies. Domestic cats are also very effective to the extent of their range.

I have noticed that when a squirrel has located within a certain radius, a familiar gray and white object may soon be seen humped at his burrow; and the next time I go there the crafty spider has spun his web across the hole and presumably has his "parlor" just inside.

I have been led to these remarks by the advent among us of the veritable squirrel poisoners, the Gerow Bros., who have in our valley pretty effectually destroyed them at 10 cents per acre, which is less to us than cost of poison. As is well known, they have a patented preparation very attractive to the squirrels. Of course there is no difficulty in getting poison enough for all the squirrels in Christendom, but the trouble would be in catching and drenching them with it. From these professionals one may gather many items that are of use to those who must still poison their own squirrels.

Preparing the Poison.

Use the best brand of strychnia—Chas. Pfizer & Co., New York. To one ounce of strychnia crystals thoroughly pulverized in a mortar or common bowl, add a tablespoonful of vinegar, about a half pint of water and a half pound of brown sugar. Let this be well stirred and then very thoroughly mixed with eight quarts of clean, dry wheat. Their patented preparation was mixed with the sugar, etc., in the bowl or mortar.

I think a better way for those of us who have nothing to make it "smell good" is as follows:

Pulverize and dissolve the strychnine in vinegar and water and mix with the dry wheat. After it is all absorbed stir in the sugar (first dissolved in a little water), and this will sugar-coat the whole lot so that the first taste will be sweet. The great fault of those unaccustomed to the business is in not making it strong enough. The squirrels eat it and are not killed, especially when fat.

From 30 to 50 kernels may be left at each hole, and care should be taken to scatter it. If thrown too much in heaps, the first squirrel will eat a little and pack the balance into his pouch before he dies—a sad example of the selfish, bloated capitalist! Occasionally other squirrels will extract it, eat and die.

It should be put out early in the morning, at noon, or an hour or so before sundown, otherwise birds, etc., will get much of it. It should be put out from on horseback, as you thus command a much wider view. After the first poisoning, if more are seen dose them again. In a day or so fill all the holes and follow up with the poison those that dig out.

If some "old rats" get cautious and cunning,

go after them with the bisulphide of carbon, sulphured rags, or drown them out with water; for it is a great waste to pay \$20 or \$30 for clearing your farm and then have just enough left to stock the whole again.

Districts should join and choose for poisoner a man who can be trusted to do thorough work, and all could be watchful and help along the business upon their own lands, each paying his proportion of expense, which would not be heavy after the first "extermination."

That they can be wholly routed from any locality I know; "Eternal vigilance" is the price, etc.

I have been greatly interested in Dr. Ryer's articles upon irrigation. In Geo. E. Waring's "Farmer's Vacation in Europe," there are excellent illustrations given of the Dutch method of raising water. The book, price \$3, is published by the Orange Judd Co., N. Y., and would furnish, I think, many valuable suggestions to those about to undertake such works.

D. M. LOCKE.

Springvale Farm, Santa Cruz.

[Thanks; these details are valuable. Col. Waring's "Farmer's Vacation" is worth reading. On irrigation there is also Henry Stewart's work published by the same house, price \$1.50. Both these books can be ordered from this office.—Eds. PRESS.]

A Handy Pruning Saw.

EDITORS PRESS:—I send you herewith, according to promise, a description of the champion pruning saw devised by me, and manufactured by the Pacific Saw Co. It supplies a long needed want in orcharding, which makes it almost an invaluable tool in an orchard. The frame is made of the best spring steel, constructed somewhat on the principle of a butcher's saw, with the exception of the saw blade being much narrower; and instead of being stationary, it revolves so that the pruner is enabled to adjust the blade to cut at any angle as is often necessary to do when cutting where limbs grow close together, and where it would be impossible to use an ordinary saw of a wider blade. The blade is only one-fourth to one-half inch wide, and therefore not liable to get pinched in the cut. Strength, far superior to the strongest hand saw, is imparted to the blade of the champion by a tension screw under the handle which tightens the blade. The blade is easily detached. It can be done in an instant by slackening the tension screw (when necessary to change or replace the blades), and lifting the blade out of the slot in the clutch in the end opposite the handle.

Another great advantage of this saw is the ease with which the operator can carry it, swinging on the arm while he is using his knife in paring his cuts or trimming small limbs, thereby saving much time and annoyance in finding a place to put his saw. As he is often dropping it out of the tree or off the step-ladder, much time is saved when it is carried on the arm, as it is done without the slightest inconvenience. The common scroll saw blades 18 inches long, No. 20 or 21 gauge will fit, and which can be bought for \$3.50 per dozen. The public is at liberty to use this saw, as it is not covered by a patent.

Wm. H. JESSUP.

Haywards, Alameda Co., Cal.

Grape Vines for Cows.

EDITORS PRESS:—I am told that strong growing grapevines make excellent feed for cows and good milk. Who has tried it? While traveling through Contra Costa and Solano counties, and other places, some years since, I noticed that much of the pasture land, from over-feeding or some other cause, had become useless for feed for the want of something valuable to take the place of the worthless weeds. Now if those weeds are destroyed and grapevines well started, so they can take care of themselves, it may be the means of redeeming thousands of acres now useless, as they will need no care after once well started, except to see that a proper amount of stock be allowed to feed on them. Try it friends.

C.

Mountain Glen, Sept. 8th, 1878.

SELF-REGISTERING ELECTRIC RAIN GAUGE.—This instrument was shown at the meeting of the British Association by Mr. Yeates, a small stream of water being provided as a substitute for rain. The water trickles from the reservoir and falls into a double-balanced bucket. The balanced buckets empty themselves as they are filled, each filling being equivalent to one-hundredth of an inch fall of the surface of the water in the reservoir. The motion of the buckets as they empty themselves makes and breaks connection with an electric battery, and by this means each fall of one-hundredth of an inch is self-registered on a dial. On a second dial the inches appear, and the rainfall in inches and hundredths of an inch can thus be read off at once without the slightest trouble.

CHEAP ICE MACHINES.—A Paris correspondent says that there are on view at the Paris exhibition, ice machines of French manufacture, which may be purchased retail at about 16 apiece, and which are capable of turning out from six to eight pounds of ice in 90 minutes, at a cost of one farthing per pound.

ARBORCULTURE.

The Atlantic and Pacific Forests.—No. 6.

[By PROF. ASA GRAY.]

But now other and more theoretical questions come to be asked, such as these:

Why should our Pacific forest region, which is rich and in some respects unique in coniferous, be so poor in deciduous trees?

Then the two big trees, Sequoias, as isolated in character as in location—being found only in California, and having no near relatives anywhere—how came California to have them?

Such relatives as the Sequoias have are also local, peculiar, and chiefly of one species to each genus. Only one of them is American, and that solely Eastern, the Taxodium of our Atlantic States and the plateau of Mexico. The others are Japanese and Chinese.

Why should trees of six related genera, which will all thrive in Europe, be restricted naturally, one to the Eastern side of the American continent, one genus to the Western side and very locally, the rest to a small portion of the Eastern border of Asia?

Why should coniferous trees most affect and preserve the greatest number of types in these parts of the world?

And why should the Northeast Asian region have, in a comparatively small area, not only most coniferous trees, but a notably larger number of trees altogether than any other part of the northern temperate zone? Why should its only and near rival be in the antipodes, namely, here in Atlantic North America? In other words why should the Pacific and the European forests be so poor in comparison, and why the Pacific poorest of all in deciduous, yet rich in coniferous trees?

The first step toward an explanation of the superior richness in trees of these antipodal regions, is to note some striking similarities of the two, and especially the number of peculiar types which they divide between them. The ultimate conclusion may at length be ventured, that this richness is normal, and that what we really have to explain is the absence of so many forms from Europe on the one hand, from Oregon and California on the other. Let me recall to mind the list of kinds (*i. e.*, genera) of trees which enrich our Atlantic forest but are wanting to that of the Pacific. Now almost all these recur, in more or less similar but not identical species, in Japan, North China, etc. Some of them are likewise European, but more are not so. Extending the comparison to shrubs and herbs, it more and more appears, that the forms and types which we count as peculiar to our Atlantic region, when we compare them, as we first naturally do, with Europe and with our West, have their close counterparts in Japan and North China; some in identical species (especially among the herbs), often in strikingly similar ones, not rarely as sole species of peculiar genera or in related generic types. I was a very young botanist when I began to notice this; and I have from time to time made lists of such instances. Evidences of this remarkable relationship have multiplied year after year, until what was long a wonder has come to be so common that I should now not be greatly surprised if a Sarracenian or a Dionæa, or their like, should turn up in Eastern Asia. Very few of such isolated types remain without counterparts. It is as if nature, when she had enough species of a genus to go round, dealt them fairly, one at least to each quarter of our zone; but when she had only two of some peculiar kind gave one to us and the other to Japan, Manchuria, or the Himalayas; when she had only one, divided these between the two partners on the opposite side of the table. The result, as to the trees, is seen in these four diagrams. As to number of species generally, it cannot be said that Europe and Pacific North America are at all in arrears. But as to trees, either the contrasted regions have been exceptionally favored, or these have been hardly dealt with. There is, as I have intimated, some reason to adopt the latter alternative.

We may take it for granted that the indigenous plants of any country, particularly the trees, have been selected by climate. Whatever other influences or circumstances have been brought to bear upon them, or the trees have brought to bear on each other, no tree could hold its place as a member of any forest or flora which is not adapted to endure even the extremes of the climate of the region or station. But the character of the climate will not explain the remarkably paucity of the trees which compose the indigenous European forest. That is proved by experiments, sufficiently prolonged in certain cases to justify the inference. Probably there is no tree of the northern temperate zone which will not flourish in some part of Europe. Great Britain alone can grow double or treble the number of trees that the Atlantic States can. In all the latter we can grow hardly one tree of the Pacific coast. England supports all of them, and all our Atlantic trees also, and likewise the Japanese and North Siberian species, which do thrive here remarkably in some part of the Atlantic coast, especially the cooler-temperate ones. The poverty of the European sylvia is attributable to the absence of our Atlantic American types, to its having no

magnolia, liriiodendron, asimina, negundo, no æsculus, none of that rich assemblage of leguminous trees represented by locusts, honey locusts, gymnocladus, and cladrasitis (even its cercis, which is hardly European, is like the Californian one mainly a shrub); no Nyssa, nor Liquidambar; no Ericaceæ rising to a tree; no bumelia, catalpa, sassafras, osage orange, bickory, or walnut; and as to conifers, no hemlock spruce, arbor-vitæ, taxodium, nor torreyia. As compared with Northeastern Asia, Europe wants most of these same types, also the ailantus, gingko, and a goodly number of coniferous genera. I cannot point to any types tending to make up the deficiency, that is, to any not either in East North America or in Northeast Asia, or in both. Cedrus, the true cedar, which comes near to it, is only North African and Asian. I need not say that Europe has no Sequoia, and shares no special type with California.

Now the capital fact is, that many and perhaps almost all of these genera of trees were well represented in Europe throughout the later tertiary times. It had not only the same generic types, but in some cases even the same species, or what must pass as such, in the lack of recognizable distinctions between fossil remains and living analogues. Probably the European miocene forest was about as rich and various as is ours of the present day, and very like it. The glacial period came and passed, and these types have not survived there, nor returned. Hence the comparative poverty of the existing European sylvia, or at least, the probable explanation of the absence of those kinds of trees which make the characteristic difference.

Why did these trees perish out of Europe but survive in America and Asia? Before we enquire how Europe lost them, it may be well to ask, how it got them. How came these American trees to be in Europe? And among the rest, how came Europe to have Sequoias, now represented only by our two big trees of California? It actually possessed two species and more; one so closely answering to the redwood of the Coast ranges, and another so very like the *Sequoia gigantea* of the Sierra Nevada, that, if such fossil twigs with leaves and cones had been exhumed in California instead of Europe, it would confidently be affirmed that we had resurrected the veritable ancestors of our two giant trees. Indeed, so it may probably be. "*Celum non animam mutant*," etc., may be applicable even to such wide wanderings and such vast intervals of time. If the specific essence has not changed, and even if it has suffered some change, genealogical connection is to be inferred in all such cases.

That is, in these days it is taken for granted that individuals of the same species, or with a certain likeness throughout, had a single birthplace, and are descended from the same stock, no matter how widely separated they may have been either in space or time, or both. The contrary supposition may be made, and was seriously entertained by some not very long ago. It is even supposable that plants and animals originated where they now are, or where their remains are found. But this is not science; in other words it is not conformable to what we now know, and is an assertion that scientific explanation is not to be sought.

Furthermore, when species of the same genus are not found almost everywhere, they are usually grouped in one region, as are the hickories in the Atlantic States, the asters and goldenrods in North America and prevailing on the Atlantic side, the Heaths in Western Europe and Africa. From this we are led to the inference that all species closely related to each other have had a common birthplace and origin. So that, when we find individuals of a species or of a group widely out of the range of their fellows we wonder how they got there. When we find the same species all round the hemisphere, we ask how this dispersion came to pass.

[To be Continued.]

ANCIENT SURVEYING.—Two documents of great interest to geometers have been discovered among the contract tablets in the British Museum. Attached to two terra-cotta deeds of sale of estates near Babylon are neatly drawn plans of the property. One sale took place in the reign of Darius Hystaspes; one toward the end of that of Nebuchadnezzar. The latter deed relates to a plot about $8\frac{1}{2}$ acres in area, bounded on the north side by the canal of the goddess Banitua. The names of the owners of all the adjacent lands are given, and the greatest care is taken in giving the dimensions of these plots of land. The whole is divided into three pairs of parallelograms, and check dimensions are taken to test the accuracy of the work. A semicircular portion on the east side is most carefully measured, both radius and circumference being given. The value of these documents as bases by which to fix both the linear and area measures in use in Babylonia is very great.

THE METRIC SYSTEM.—A dispatch from Paris says that the International Congress on weights, measures and coins, on September 4th, unanimously adopted a resolution deploring the fact that England, Russia and the United States had not yet adopted the metric system. American and English delegates afterward passed a resolution petitioning the English and American governments to appoint a mixed commission to consider the adoption of the system by both countries.

THE STOCK YARD.

"Red-Water" in Cattle.

EDITORS PRESS:—Please inform your reader, in your next issue, what is the best remedy to stop cows from discharging blood instead of water. Many cases have been known in this part of country lately, though with a small loss. The most practicable remedy used was a compound of turpentine with eggs, epsom salts and sulphur, with some other medical stuff. I would like to know the cause of the trouble.—S. DONATI, Old Creek, San Luis Obispo county, Cal.

The remedies enumerated by our correspondent are those generally found most effective in the trouble he mentions. As a full description of the malady is desired, we quote from Youatt & Martin's work on cattle the following outline of causes, symptoms and treatment:

The disease termed *red-water*, from the color of the urine, is one of the most frequent and untractable maladies of cattle. It may be conveniently divided into *acute* and *chronic*; in fact, two diseases essentially different in their symptoms, demanding different treatment, and referable to different organs, have been confounded under this name.

A cow, in somewhat too high condition, and in whom the prudent precautions of bleeding or phlebotomy had been omitted, frequently, a week or two before the time of calving, suddenly exhibits symptoms of fever; she heaves at the flank; she ceases to ruminate, and evidently suffers much pain; her back is bowed; she is straining in order to evacuate her urine, and that is small in quantity, expelled with force, highly tinged with blood.

At other times, a few days after calving, when she had not cleansed well, or was in too good condition, and had not had that dose of purgative medicine which should always follow parturition, she suddenly manifests the same symptoms of illness, speedily succeeded by a similar discharge of bloody urine.

The nature and cause of the disease are here evident enough. During the period of pregnancy there had been considerable determination of blood to the womb. A degree of susceptibility, a tendency to inflammatory action, had been set up; and this had been increased as the period of parturition had approached, and was aggravated by the state and general fullness of blood to which she had incautiously been raised. The neighboring organs necessarily participated in this, and the kidneys, to which so much blood is sent for the proper discharge of their function, either quickly shared in the inflammation of the womb, or first took on inflammation, and suffered most by means of it.

An overdriven bullock is seized with acute inflammation of the kidneys; another that has been shifted from poor to luxuriant pasture is soon observed to have red-water. There are some seasons when it is in a manner epidemic, when a great proportion of the beasts in a certain district are attacked by it, and many of them die. Atmospheric influence has not been taken sufficiently into the account in the consideration of this and almost every other disease. It is seldom that one dairy is attacked by red-water, without many or most of the neighboring ones being annoyed by it, and especially if the soil and the productions of the soil are similar; and even cattle in the straw-yard have not then quite escaped. It is more prevalent in the spring and autumn than in the winter, and more in the winter than in the summer; it is particularly prevalent when, in either the spring or fall of the year, warm days succeed to cold nights and a heavy dew. It is peculiar to certain pastures; the farmer scarcely dares to turn even the cattle of the country upon some of them; and a beast brought from a distant farm or market is sure to be attacked.

The result of general experience is, that it has more to do with the nature of the food than with any other cause; and the production or the unusual growth of the astringent and acrimonious plants may have considerable influence here. The malady may with more probability be traced to the quality of the general produce of the soil, than to the prevalence of certain plants of known acrimonious or poisonous properties.

This noxious quality may be communicated by excess or deprivation of moisture. There is no farmer who is not aware of the injurious effect of the coarse rank herbage of low, and marshy, and woody countries, and he regards such districts as the chosen residence of red-water.

The farmer must carefully observe the effect of the different parts of his farm in the production of this disease; and observation and thought may suggest to him that alteration of draining or manuring, or other management, which may to a considerable degree remedy the evil.

Acute red-water is ushered in by a discharge of bloody urine, and is generally preceded by dysentery, suddenly changing to obstinate costiveness; and as soon as the costiveness is established the red-water appears. There is laborious breathing, coldness of the extremities, ears and horns, heat of the mouth, tenderness of the loins, and every indication of fever; it often runs its course with fearful rapidity, and the animal is sometimes destroyed in a very few days.

When the carcass is examined there is generally found some inflammation of the kidney, enlargement of it, turgescence of its vessels, yet very rarely any considerable disorganization, and certainly not so much affection of it as would be expected; but in cows the uterus exhibits much greater inflammation; there is

often ulceration, the formation of fetid pus, and occasionally gangrene; there is also peritoneal inflammation, extensive, intense, with adhesions and effusions, while the lining membrane of the bowels rarely escapes inflammation and ulceration.

There can be little doubt about the treatment of such a disease. There has either been an undue quantity of blood determined to the kidneys, with much local inflammation, and before the pressure of which the vessels of that organ have given way, or so much blood has been always traversing the kidney, that there is a facility in setting up inflammation there. Bleeding will be the first step indicated. The first bleeding should be a copious one; but the repetition of it will depend upon circumstances. The hemorrhage, or bleeding, is clearly active. It is produced by some irritation of the part; its color shows that it proceeds from the minute arterial or capillary vessels. When bloody urine flows from the kidney, that organ is giving way under an increased discharge of its natural function, and that function is increased in order to compensate for the suspended one of another part, namely, the natural action of the bowels. Three objects will be accomplished by bleeding: The first, a diminution of the general quantity of blood; the second—a consequent of the first—the removal of congestion in the part; and the third is the giving a different direction to the current of blood.

Purgatives should follow, with a view more quickly and effectually to accomplish all these objects; and from the recollection of a circumstance most important to the practitioner, that red-water closely followed the establishment of constipation. A pound of epsom salts should be immediately exhibited, and half-pound doses every eight hours afterwards, until the bowels are thoroughly acted upon.

There is too frequently great difficulty in purging cattle when laboring under red-water; dose after dose may be administered for three or four days, and yet the bowels will remain obstinately constipated. Either there is a strange indisposition in them to be acted upon, or the rumen sympathizing with the derangement of other organs, the muscular pillars of its roof yield to the weight of the fluid, whether hastily, or cautiously administered, and the medicine enters that stomach, and is retained there until the beast is lost. The physic must be repeated again and again; it must gently trickle down the gullet, so that it shall fall on the roof of the paunch with as little force as possible; and after the second day, in spite of the fever, unusual doses of aromatics must mingle with it, that the rumen, or the intestines, or both, may be stimulated to action. In the majority of cases, and especially before the strength of the animal becomes exhausted, the commencement of purging will be the signal of recovery.

It, nevertheless, too often happens, that the constipated state of the bowels cannot be overcome, but the animal becomes rapidly weaker, while the blood assumes a darker, and sometimes a purple or even a black color. The danger is now increased, and probably death is not far distant. In many cases, however, the beast not being too much exhausted, the dark and coffee-colored urine is a favorable symptom, especially if it be discharged in evidently larger quantities and not so frequently.

The appearance of the darker fluid, and even the continuance of the florid red urine, when the fever has subsided to a considerable degree, will indicate a different mode of treatment. The hemorrhage will have become *passive*. The blood will flow because the vessels have lost their power of contracting on their contents. It has then been usual to give astringents; but this is dangerous practice, for the constipation, which is the worst symptom of the disease, and which immediately preceded the red-water, and was, probably, the exciting cause of it, may be confirmed or recalled. Stimulants, and those which act upon the kidney, will be most likely to have beneficial effect. The common turpentine, the balsam of copaiba, or even spirits of turpentine, especially if it be guarded by the addition of a few drachms of laudanum, may be given with advantage. The weakened vessels of the kidney may occasionally be roused to close on their contents, and the hemorrhage may be arrested.

ATMOSPHERIC NITROGEN.—At a recent meeting of the Society for the Encouragement of National Industries in France, M. Basset read a paper on the researches which he had made to discover a means of obtaining ammonia at a low price and on a large scale through the medium of the nitrogen of the atmosphere. This question, of such importance to agricultural interests, has been the object of M. Basset's studies for more than a quarter of a century. The problem he proposed to himself was to generate nitrogen under moisture in the presence of nascent hydrogen. After explaining the various methods employed in his attempts to provoke this reaction, M. Basset announced that he had ultimately arrived at complete success, and was then in a position to turn out ammonia on a wholesale scale at the rate of five farthings a pound, and sulphate of ammonia at about four-fifths of that price. At the same time he deposited in the office a full description of the system he adopted, which was referred for examination and report to the chemical committee of the society. It need scarcely be said that if M. Basset's reported discovery is capable of practical application on the scale that he confidently believes, a complete revolution is at hand in the artificial manure trades and kindred industries.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Sixth Annual Meeting of the State Grange of California.

One of the most earnest and yet harmonious sessions of the State Grange opened in due form in "The Turners' Hall," Sacramento, at 1:30 P. M., Tuesday, October 1st, 1878, Worthy Master I. C. Steele presiding. The daily sessions were held in the fourth (subordinate Grange) degree during the remainder of the week. Many Past Masters (who are honorary members) and fourth degree members were present, receiving Grange instruction and paying marked attention to the proceedings. The attendance was prompt and remarkably regular.

Officers.

Officers present—Master I. C. Steele, San Mateo county; Overseer, B. R. Spilman, Sutter county; Steward, Nelson Carr, Sonoma; Assistant Steward, E. W. S. Woods, San Joaquin; Lecturer, B. Pilkington, Santa Cruz; Chaplain, Mrs. Jeanne C. Carr, Sacramento; Secretary, Ainos Adams, Sacramento; Gate-keeper, T. T. Hooper, Solano county; Ceres, Mrs. Sarah H. Webster, Alameda; Pomona, Mrs. Fannie L. Manlove, Sacramento.

Officers absent—Treasurer, C. J. Cressey, Lady Assistant Steward, Miss Maggie Carr. Mrs. G. W. Hancock filled the last named office during most of the session.

Representatives.

[The first name is that of the Grange, the second that of the delegate, and following is the county of the delegate's residence.]

Antelope Valley, H. A. Logan, Colusa; Alhambra, Dr. J. Stentzel, Contra Costa; Bennett Valley, I. De Turk, Sonoma; Buckeye, J. H. Wilgus, Yolo; Cloverdale, J. G. Heald, Sonoma; Ceres, M. B. Kittelle, Stanislaus; Confidence, S. D. Triplett, Santa Barbara; Clarksville, T. Maltby, El Dorado; Cosumnes, Gillis Doty, Sacramento; Cahto, J. G. Burns, Mendocino; Cambria, C. H. Evans, San Luis Obispo; Cedarville, Geo. Colborne, Modoc; Danville, Chas. Wood, Contra Costa; Deep Creek, F. G. Jeffers, Tulare; Elmira, J. A. Clark, Solano; Enterprise, F. B. Clark, Los Angeles; Enterprise (Sacramento county), A. M. Plummer, Sacramento; Elk River, A. J. Knapp, Humboldt; Eden, L. Perham, Alameda; Elliott, H. H. West, San Joaquin; Elko; J. A. Tinker, Elko (Nev.); Eagleville, J. W. Brown, Modoc; Fairview, Edward Evey, Los Angeles; Florin, C. Towle, Sacramento; Franklin, W. L. Morton, Tulare; Grand Island, H. D. Strother, Colusa; Galt, George N. Gray, Sacramento; Grass Valley, Alexander Henders, Nevada (county); Garden Valley, Theo. Schlinn, El Dorado; Healdsburg, B. B. Capell, Sonoma; Indian Valley, G. W. Boyden, Plumas; Merced, A. D. Turner, Merced; Morro, H. Y. Stanley, San Luis Obispo; Montezuma, Thomas T. Hooper, Solano; Mountain, G. M. Butterfield, San Benito; Merritt (Nevada), J. J. Fox, Emerald (Nevada); Napa, J. M. Thompson, Napa; Nord, L. McIntosh, Butte; North Butte, Otis Clark, Sutter; National Ranch, Flora M. Kimball, San Diego; New Castle, R. M. Nixon, Placer; Old Creek, E. H. Smith, San Luis Obispo; Pilot Hill, J. W. Davis, El Dorado; Potter Valley, Wm. Eddis, Mendocino; Pomo, John McWhenny, Mendocino; Plymouth, R. M. Ford, Amador; Placerville, F. M. Dickerson, El Dorado; Plumas, B. F. Bobo, Plumas; Point of Timber, S. M. Wills, Contra Costa; Petaluma, W. W. Chapman, Sonoma; Rustie, George N. Haines, San Joaquin; Rio Vista, J. H. Gardner, Solano; Rincon, John Taylor, San Bernardino; Rasina, B. Marks, Fresno; Stanislaus, V. E. Bangs, Stanislaus; Salida, A. H. Elmore, Stanislaus; Suisun and Rockville, J. McMullen, Solano; San Jose, C. T. Settle, Santa Clara; Sacramento, D. Flint, Sacramento; Santa Rosa, John Adams, Sonoma; St. Helena, John Lewelling, Napa; Santa Maria, J. J. Holloway, Santa Barbara; Santa Cruz, G. C. Wardwell, Santa Cruz; Stockton, C. Grattan, San Joaquin; Santa Clara, P. G. Keith, Santa Clara; South Sutter, Thomas Boyd, Sutter; Social, S. W. Prothero, Sacramento; Temescal, P. H. McGrew, Alameda; Two Rock, A. Wilsey, Sonoma; Vacaville, R. C. Marshall, Solano; Vallejo, J. F. Denning, Solano; West San Joaquin, J. C. Allen, San Joaquin; Woodbridge, E. J. McIntosh, San Joaquin; West Grafton, George Sharpnack, Yolo; Walnut Creek, M. L. Gray, Contra Costa; Watsonville, D. M. Clough, Santa Cruz; Washington, D. R. McIntire, San Joaquin; Wheatland, F. Kershner, Yuba; Yuba City, T. B. Hull, Sutter.

The above list is given as reported by the daily Union. Quite a number of the Masters were accompanied by their wives, who are also members of the State Grange. We regret that we have no record of their names. Other representatives came in from time to time during the session.

To Condense our Report

As much as possible, we avoid giving a detailed account of the proceedings from day to day, and only state the more important actions had without regard to the precise order in which business was presented; we also omit mention of such matters as were not finally passed.

Worthy Master I. C. Steele's Annual Address.

Worthy Patrons:—At this, the sixth annual meeting of "The State Grange of California," the valuable deductions to be gathered from past experience should guide us in our efforts to promote the interests of agriculture, and the elevation of our class. To these should be added all the information attainable from every source bearing on the subjects to be considered.

The mistakes and failures that have attended our efforts should be clearly indicated on our chart as rocks and shoals to be shunned; the success and happiness attained, treasured as an earnest of the future.

Our Prosperity.

While other lands have suffered the untold horrors of war and famine, and portions of our own beloved country have been afflicted with a death-dealing epidemic, our State enjoys peace, health and plenty. We should be thankful for these blessings while we extend sympathy and aid to the afflicted.

The agricultural year just closed has been the exact reverse of the one that preceded it—excess of wet in place of drouth. Floods have swept the deltas carrying destruction in their course, while an abundant harvest has terminated the suffering in the section visited by drouth the previous year. In other fields, subject to neither drouth or overflow, noxious weeds, foul seed, blight and the ravages of parasites, have caused much disappointment. But with all these disadvantages our State has a large surplus of agricultural products for export. This is gratifying; but we should not be unmindful of the fact that every pound exported is so much fertility taken from the soil. Herein lies the necessity for agricultural science. The fertility of the soil must be maintained or the State is robbed, and we will have but a poverty stricken heritage to bequeath our children. We need more certainty in the results of our labor. We must have a more thorough and comprehensive system of culture. Every step we take in our calling, the demand for knowledge is paramount.

There is no occupation that has use for such varied information as agriculture. All science and art must contribute to its highest attainments.

In no other occupation does man come so near creative powers. It deals with life itself, the most subtle agent known. We have only reached the threshold of nature's capabilities. The region of possibilities lies beyond unexplored.

The rudiments of the natural sciences must be taught in our public schools in the rural districts, and our University of California furnish us professors of agriculture. We must know what has to be learned as a basis for further acquisitions.

No matter what we may think of "hook farming," there are suggestions contained in the experience of others that we cannot ignore. We must

Raise Agriculture to Its Proper Level—

Then will the country be beautified and the city adorned. But how is all this to be accomplished? That is the question we are called upon to answer—the mission we have organized to fill.

There is eternal fitness in all natural forms. For matter is but the shadow of the vital energy that produces change, and forms indicate the degree of refinement attained in the creative process. Man has struggled to solve the problem of his own existence, and to know human relations with creative power. Creeds or forms of belief are "footprints on the sands of time," pointing the way traversed by ascending life. The efforts of mankind to settle differences of opinion and bring all to one standard has served to more clearly define the grounds of dispute. It was necessarily so. The universe is strung to vibrate in harmony, not in union.

We bow to no arbitrary creed, submit to no party trammels, but strive to move in obedience to the law of progress. We hail every change that brings improvement, and feeling the heart throbs of the ages seek harmony in liberty. Our bond of union is fraternal affection.

The Subordinate Grange

Was designed to unite all farmers and their families who are devoted to agricultural improvement and social progress. Its meetings were intended to break the monotony of farm life, and to form a common council for the consideration of every subject that affects the farm, the home and the neighborhood. To make friends of strangers, and through acts of kindness create a general interest to be expressed in public spirit. Among those imbued with its spirit it is a success; but some have joined the Grange and left it—could not see the dollars and cents in it. When members, they did not attend meetings; they never perused its literature, have gone back on their pledges, and complacently ask: "What good has the Grange done?" There are others who take note of every Grange failure and are alarmed. They never think of the magnificent success it has achieved; they see the rear guard of our progressive movement, and are useful in their way.

The State Grange composed as it is of delegates from subordinate Granges located in every part of the State, should consider the wants and wishes of all, and adopt a "State policy that will secure the greatest good to the greatest number."

Concentration of Efforts.

Past experience admonishes us of the propriety of confining our efforts to objects that can be reached. We should endeavor to carry forward whatever we attempt, and not dissipate our strength by attempting too much. In matters of State the power is in the people. If the people are true to themselves there can be no such thing as an anarchical revolution. When the people earnestly demand an honest, economical administration of public affairs, then will such an administration be obtained. Justice is the central point about which human interests cluster, and whatever defeats justice is injurious. Excessive penalties are seldom enforced, and render laws inoperative. Let us have just laws and then see that they are enforced, for such is the duty of citizens.

The provisions of the organic law of the State, now being revised by the

Constitutional Convention,

is of vital interest to agriculture and should receive your careful consideration. To tax the yearly products of the farm, after taxing its soil and everything upon it, is unjust. The Constitution should find every proper subject for taxation, and require an equitable adjustment of the necessary expenses of government.

The powers of the Legislature should be clearly defined, and class legislation—that source of corruption—curtailed. The third house should be wiped out. And the people should retain the power to protect themselves from the curse of intemperance. On the other hand, there should be no changes made in the organic law not warranted by experience.

National Grange.

At the last session of the National Grange, an amendment to the preamble of the Constitution of the National Grange, changing the basis of representation in that body was passed and submitted to State Granges for ratification, and was rejected. It will undoubtedly come before the National Grange again at its next meeting. An expression from this Grange on the subject is desirable. An amendment permitting a State Grange to elect a delegate to the National Grange, in case the Master is unable to attend, is, in my judgment, desirable.

There has been a misapprehension with some about the higher degrees of our Order, which I desire to correct. There is nothing in them to which a reasonable man can object. They simply perfect its symmetry. Instead of exclusive privileges they confer the most solemn obligations.

The financial business of our Order is all conducted in the fourth degree, and is open to the inspection of every member who contributes to its funds. For the

Financial Condition

Of the State Grange I refer you to the able report of the Worthy Secretary. Our expenses have been measured by the most rigid economy. I wish to acknowledge the deep obligations I feel to the Grangers' Bank, the Farmers' Mutual Fire Insurance Company and the Grangers' Business Association for timely aid in times of need. Appeals to them for aid have never been in vain. To the boards of directors of those three institutions, I wish to express thanks for their individual liberality and uniform kindness.

The subject of finance is important to the Order, for the efficiency of its labors depends largely upon the condition of the treasury. I hope this subject will receive your careful consideration that the means may be forthcoming to pay the necessary expenses attending the accomplishment of your purpose.

The reports of the Worthy Secretary and Worthy Lecturer will furnish you all needful information of the condition of subordinate Granges in this jurisdiction.

Under instructions of the Executive Committee, the Worthy Master and Worthy Secretary conferred with Bros. Dewey and Ewer, of the RURAL PRESS, on the further publication of the

"California Patron."

After the expiration of the contract with that paper, and finding them willing to turn the *Patron* over to the State Grange, on reasonable terms, it was determined, after consulting many Patrons, to make it semi-monthly, and, if possible, a source of revenue to the State Grange. So far it is a success. The labor of preparing it for the press has been performed by the Worthy Secretary, to whose untiring efforts depends much of its success. The contributions to its columns are a free offering from brothers and sisters of our Order. To Sister Colby, Sister Kimball, Bro. Rich, and all others whose contributions show their devotion to the Grange, I offer my heartfelt thanks.

It was my good fortune to accompany the Worthy Lecturer through a portion of his

Lecturing Tour,

And I can testify to the ability and devotion with which he fills the position to which the State Grange has twice elected him. It was my intention to have made a more extended tour through the State, but circumstances I could not control prevented. As a result of my observations, I am of opinion that subordinate Granges only need to have their work properly laid out to make their meetings interesting and profitable. I look for

A Revival of Grange Work

The coming year. The value of Grange principles, and the fraternal power in the Order, point to such a result. The Grange should provide rational amusement for the young, and counteract the sociability of drink, for in it lurks one of the deadliest foes to human happiness.

The necessity of establishing more intimate relations between producers and consumers has engaged the attention of thoughtful men for years, and from it came the idea of co-operation. It is not the amount of a farmer's crop alone that gives him thrift, but the amount of profits that enable him to make improvements and afford his family culture and refinement.

When we see our cities growing out of all proportion to the country. The professions crowded, commercial pursuits crammed until sharp practice has become the rule in trade, and farmers' children still deserting the country for the town, leaving agriculture for non-productive and speculative pursuits; these questions come home to us with a mighty power: "What does it mean?" "What are to be its results?" "How can it be stayed?"

If continued it means corruption, want, unrest, revolution. There is need for a readjustment of human occupations; agriculture must be freed from the human parasites that absorb its profits.

This Herculean task the Grange has undertaken. Its business arm is stretched out to guard the farmers' interests in the markets.

Grange Business Associations.

For your information, I append such reports as I have been able to obtain from institutions organized under the auspices of the Grange in California.

The Grangers' Union, of San Joaquin valley, has transacted business to the amount of \$145,513.69 in the last eight months. This company manufactures the Scout patent four-pointed steel barbed fence wire.

California Mutual Fire Insurance Company have insured on the mutual plan as follows: Amount insured, \$3,008,250; premiums, \$151,580.49; losses, \$55,853.63; expenses, \$50,750.10; commissions, \$20,591.87.

One of the chief objects in establishing the Grangers' Bank was to assist farmers in handling their crops, and in carrying out that intention the bank has this year loaned to farmers in Alameda county, \$11,500; Colusa county, \$8,370; Monterey county, \$500; Merced county, \$10,200; San Francisco, \$24,400; Solano county, \$2,800; Stanislaus county, \$23,490; Tulare county, \$13,940; Los Angeles county, \$1,500; total, \$104,800. In addition to this, advances have been made on wheat shippers to the amount of \$80,000.

The following general statement of the business of the Farmers' Co-operative Union, of San Jose, is given by Bro. C. T. Settle, September 25th, 1878:

"We commenced business July 15th, 1874, with a cash capital of \$8,222; on January 1st, 1875, our capital had increased to \$20,575; and our profits for the five and a half months were \$2,006.12, all of which was carried to the reserve fund.

"During the year 1875 the capital paid up was increased to \$50,000; our profits for that year were \$10,784.44, of which \$6,000 was paid in dividends, being 12% on the capital stock, only a part of which had been in a full year; the balance of profits, \$4,784.44, was carried to the reserve fund.

"During the year 1877, our paid up capital was increased to \$94,050; our profits were \$13,173.62; we paid a dividend of 12%, amounting to \$11,286, and carried the balance to the reserve fund, \$1,897.62, which makes our reserve fund stand at this time at \$23,571.82, and our capital at \$94,050.

"We have accomplished this in the face of the most determined opposition from our opponents, and not a little from those who ought to be friendly to us, for the reason that we have been the means of saving them a good deal of money whether they have dealt with us or with others, by causing the reduction in prices of merchandise and in influencing the people to do their business on a cash basis, as fast as they can arrange for it.

"We have no doubt that goods are sold here now 10% less than they would be but for the Farmers' Union, thus saving the community at least \$100,000 a year."

Secretary and Treasurer's Reports.

Worthy Secretary Amos Adams reports the membership of the jurisdiction to exceed 10,000; Granges, 223; the finances of the State Grange in a better condition than at any previous time for three years. The indebtedness of the Grange during the year has been reduced about \$900.

State Lecturer B. Pilkington returned thanks to the officers of the State Grange for support, and to the business associations of the Order for material aid. He set forth his method of visiting and working with subordinate Granges to bring them into efficient practice, and with a view of establishing a unifying policy with the whole Grange body, State, national and subordinate. He first visited the Granges privately, and then invariably gave a public lecture on the history of the Grange, its purpose, plans and work, with a glance at the outlook for the future. He declared the benefit of the business

institutions of the Order has been immense in California to the farmers of the State, enabling the farmer to have the highest attainable price known in a foreign market for every product of the farm, has secured equal advantages as to home markets, etc. This much has been accomplished with the benefits also of insurance, and now the next step is toward a correction of the unequal system of assessment and taxation. This subject and class legislation he then discusses briefly, and asks if the Grange can offer a remedy for the evils cited. He believes it can, judging by its past successes. It can only be done by legislative action. To accomplish this Grangers in California must dissolve all

Past Political Partisan Ties.

And on their ashes rear a standard of true Grange principles. Agricultural industry must be represented in the State Legislature only by the friends of agricultural industry, so far as the political policy of the Granger can make it so. This step, wisely and unflinchingly taken, will bring success as surely as have the former steps taken by the Order in California. The Lecturer states the details of his visits to Granges during the year, during which he traveled over 5,000 miles and paid out for expenses \$681.45. He labored 130 days, at an expense of \$3 per day; total, \$1,071.45. He gives a list of sums paid by Granges to the treasury in discharge of this amount. As to the next Grange year, he advises that the whole south part of the State be visited, and many of the isolated Granges not now in the routine line of visitation. He believes the future outlook to be full of promise, and says the subordinate Granges await the action of the State Grange with lively interest as to all its affairs. He says the great question now is, are the Grangers—farmers and industrial citizens of the State—capable of self-government and self-protection? Have they the wisdom to carry on an organization whose sole aim and principle is to unite together men and women of like calling, like interests and like sympathies in the one great plan of wise legislation, for the people of the whole State, instead of submitting to and being ostracized by capitalistic leadership? The retrospect he found full of encouragement to the Granges, in advancing this reform. The principles of the Order cannot be successfully assailed, and the call for their extension is now as wide as the State is large. After urging the membership to faithfulness and energy, the report closes.

Woman Suffrage

Wednesday evening was devoted principally to discussing the proposed amendments to the State Constitution. Prof. E. S. Carr made eloquent remarks, which were most enthusiastically received. Mr. Blackmar, of San Diego, a member of the Constitutional Convention, also gave a forcible appeal in favor of woman suffrage. Other able and earnest speakers discussed on both sides of the question, and the following resolution was pretty unanimously adopted:

Resolved, That it is the opinion of this Grange, that the social, moral and financial standing of the people of California would be very much benefited by extending the right of franchise to women.

Standing Committees.

The following were appointed during the session:

On Amendments to the State Constitution—John Adams, L. McIntosh, P. H. McGrew, C. Grattan, P. G. Keith, Wm. Johnston and G. W. Hancock.

On Transportation—A. H. Elmore, H. W. Cathrine, J. A. Clark, A. M. Plummer and J. J. Holloway.

On Master's Address—S. T. Coulter, W. W. Chapman and Mrs. Alexander.

On Good of the Order—J. Strentzel, G. Doty and Mrs. L. A. Clark.

On Legislation—C. Grattan, J. J. Holloway, J. P. S. Bass and Mrs. G. W. Hancock.

On Appeals—C. T. Elliott, C. H. Cooley, J. H. Wilgus, H. A. Logan and Mrs. J. F. Deming.

On Finance—D. Flint, A. H. Elmore, J. F. Deming and Mrs. P. H. McGrew.

On Co-operation—G. W. Hancock, S. M. Wills and Mrs. L. E. Elliott.

On Resolutions—Wm. Johnston, B. F. Bobo and Mrs. Ford.

On Officers' Reports—A. Henderson, J. McMullen and Mrs. H. L. Carr.

On Constitution and Laws—J. G. Mewhinney, D. M. Clough, J. Lewelling, J. G. Heald and Mrs. S. H. Dewey.

On Feast of Pomona—W. W. Chapman, D. Flint, E. W. S. Woods, George Rich, Nelson Carr, Mrs. H. L. Carr, Mrs. G. W. Hancock, Mrs. Dr. W. S. Manlove and Miss Hattie Sprague.

Executive Committee Elected.

G. W. Hancock, President of the Grangers' Co-operative Store in Sacramento was elected for three years; Dr. C. Grattan, of Stockton, for two years; and P. H. McGrew, of East Oakland, for one year—all well-known active men of good repute.

Other Proceedings.

A considerable portion of the session was devoted to discussing proposed amendments to the State Constitution, quite a number of which were recommended for adoption by the State Convention. These will probably be given in our next issue, illustrating in a measure the spirit of progress and reform with which the Grange is imbued.

Pomona (the fifth degree of the Order) is the degree of the State Grange. On Friday evening it was conferred upon over 70 brothers and sisters. Pomona, Miss Fannie L. Manlove,

crowned the ceremony with grace and dignity, beautifully supported by her attendants—Ceres, Flora and maids of honor. Marching in due order to the lower hall of the building, the large number present found extensive tables, ornamented with flowers, and freighted with choice samples and varieties of grapes and other fruits. Some aged and choice wines were sampled to a limited extent, upon a side table. We hope to be able to give the names of the contributors to the feast hereafter. After an hour's feasting and conversing the company re-assembled in the upper hall, where, with music enlivening, a goodly number joined in dancing, until the programme of the evening was gaily and joyfully played out.

The "Grangers' Love Feast" on Saturday evening was an unceasing and joyful flow of heartfelt words, music and songs—finally closed by hearty, yet reluctant, fare-yewells.

A resolution to hold the next session in San Francisco was amended and passed, by motion of Liberty Perham, supported by P. H. McGrew, fixing Oakland as the place of meeting in 1879.

Much credit was given to the patrons of Sacramento, who furnished the hall, music and other generous contributions, with their kindly and untiring attentions throughout the session.

After some other matters of interest have been passed on for publication by the Executive Committee, we expect to give a further report.

A Hint for the Convention.

EDITORS PRESS:—The country is flooded with articles of light weight: five pounds ranging all the way from four to four and a-half pounds. Few goods sent out by manufacturers are really what they are represented to be in quality or quantity. Would it not be well to secure an honest mode of merchandising, without fraud in measure, weight and quality? It may not be within the province of Constitution makers to deal with such a question; but a more practical question for the good of all—except dealers and manufacturers—cannot engage the attention of law makers.

JOHN TAYLOR.
Mt. Pleasant, Cal.

Premiums at the Northern District Fair.

The Northern District fair at Marysville was duly held last week, and the following is the list of premiums as compiled by the *Appeal*:

Young Ladies' Premiums.

Bread Making—*Appeal* prize—Maria Mattoon.
Dress Making—Society prizes—First, Alice Tobin; 2d, Lulu Sawyer; 3d, Lulu T. Murphy. Premiums recommended to Huldah Heimerl, Eva Morris, Mamie Dean and Louisa Lockhart.
Riding on Horse Back—First, Miss French, silver goblet; 2d, Miss Louisa Beahman, set of jewelry; 3d, Miss Lillie Cockrill, pair of family blankets.

Premiums at Pavilion.

Marysville/Woolen Mill—Display of woolen goods; Malinda Aulman, worsted embroidery; Mary Quinlan, do; A. Smith, do; Alice Dobbins, wax work; Mattie Gage, needlework; Louisa Frohn, needlework picture; Nettie Nelson, best hair work; Moon & Creighton, boots and shoes; Mrs. N. P. Dobbins, ladies' and children's clothing; Mrs. A. Woods, Ottoman cover; Mrs. B. Bigelow, covered Ottoman; Mrs. Daniel McCarty, Ottoman cover; Mrs. B. Bigelow, crocheted sofa cushion; Mrs. N. D. Rideout, crocheted shawl; Mrs. Daniel McCarty, silk embroidery, lamp mats; Mrs. C. M. Holland, chenille embroidery; Mrs. E. A. Davis, tatting collar; Mrs. J. J. Shaffer, best and handsomest dress; Mrs. A. C. Aulman, wax flowers, cross and wreath; Mrs. Daniel McCarty, wax work sp. prem; Mrs. S. L. Frost, wax water lilies, sp. prem; Mrs. Daniel McCarty, moss and lichen work; Mrs. J. C. White, best knit bedspread; Mrs. George Ohleyer, patchwork quilt; Miss P. E. Rumery, child's afghan; Mrs. Daniel McCarty, child's afghan braided.

Agricultural Products.

Samuel Henry exhibits three varieties of wheat, Tuscan, Genesee and Club. The Committee decided that the Tuscan wheat is the best of all exhibits, and awarded a prem. Also recommended to the other exhibitors a sp. prem, viz: B. F. Johnson, Pride of Butte; George Ohleyer, Pride of Butte Proper, Genesee, best barley; J. P. Onstott, white Chile Club; Grass Bros., yellow corn, tomatoes, drum-head cabbage, white potatoes; Dr. Chandler, sweet potatoes, Hubbard squash; T. J. McCormick, blood beet, Spanish tomatoes, sweet corn; H. Barrett, sugar beet, crooked neck squash.

Fruits.

Fresh—Best display of varieties of apples, pears and peaches, H. Barrett; best plums, figs and oranges, T. J. McCormick; grapes, Grass Bros.; largest single bunch of grapes, H. Barrett.

Dried Fruit and Nuts—Best display of raisins and other dried fruits, H. Barrett; figs, J. P. Onstott; chestnuts, H. Barrett; soft-shell almonds, Dr. Chandler.

Wine, Brandy, Preserved Fruits, Etc.

Best Brandy—Grass Bros.; best wines, H. Barrett; currant and blackberry jelly, Miss Ella Shaffer; strawberry jelly, Mrs. S. L. Frost; blackberry jam and brandy peaches, Mrs. W. N. Rogers.

Miscellaneous Department.

Mrs. George Ohleyer—Cut flowers; T. J. McCormick, roll butter; Mrs. M. Munson, biscuit; Miss Mamie Raish, soda biscuit; Miss P. E. Rumery, brown bread; Miss Ella Shaffer, wheat bread.

Honorary Mention.

Among others the following: M. F. Mannix, fine samples of green tobacco; George Larkin, patent "Boss" pruners. The Committee, after due examination, think the "Boss" pruners far superior to any ever on exhibition. J. R. Crandall, residence Auburn, placed on exhibition a patent apple parer, which pares, slices and cores. A workman with one of these can pare 30 bushels a day ready for the dryer, and the Committee would recommend this machine in preference to all others. Mrs. M. E. Lockhart, tomato catsup; Dr. Crandler, Egyptian corn, pomegranates; J. P. Onstott, green Smyrna figs; Mrs. W. N. Rogers, large exhibit consisting of cherry plums in their own liquor, grape pickles two years old, mountain gooseberry jelly, cherry plum jelly, Spanish pickles, cucumber catsup, tomato catsup flavored with onions, dandelion plum, purple plum jelly, pickled cherries, soft soap.

PRESIDENT Diaz has organized a campaign against the Rio Grande Indians. It is believed Diaz will remove the Indians to the Pacific slope.

AGRICULTURAL NOTES.

California.

CONTRA COSTA.

EGYPTIAN CORN.—*Gazette*, Oct. 5: This new cereal first introduced in our section this season promises well to become one of the most prolific and valuable of our stock feed and forage crops. So far as can be judged from the limited trial given it here, the yield of seed from this plant will be two or three times as much as from Indian corn, and some of the specimens at the late fair, showing heavy heads, were grown on adobe ground unsuitable for Indian corn. The meal is said to make a delicious bread, which is generally preferred by those who have eaten it to that made from the Indian corn meal; and one lady of our town, Mrs. Dr. Carothers, who had a few plants in her garden this season, reports having found it much superior to pearl barley used as a thickening for soup.

LOS ANGELES.

IRRIGATION STATISTICS.—*Gazette*: In the recent trial of the Los Nietos water case in the District Court, the following testimony, given by Mr. Craigie, an expert in the science of irrigation, proved of such interesting character that we obtained a copy of it and are thus enabled to present it to our readers. Mr. Craigie said: A volume of 61½ cubic feet would cover 366 acres four inches deep in twenty-four hours. Allowing a rotation of twenty days it would irrigate 7,320 acres. One cubic foot of water per second will cover six acres of land four inches deep in twenty-four hours. In Lombardy, which is a country where irrigation has been more systematized than in any other in the world, they produce rice crops which require an immense amount of water, of which an idea may be formed, from the fact that the water is kept standing on the rice crops to a depth of ten inches for a period of ten weeks together. There the allowance or calculation is that one cubic foot of water a second will irrigate seventy acres of land. In the south of France, where they irrigate from a branch of the Rhone, the allowance is two hundred acres of land to one cubic foot per second. That is the best result that has been obtained. They produce maize, castor beans, cotton, pulse, and some grains which we are not familiar with. In the south of France there is a peculiar wind called the "Mistral" which causes an immense evaporation. Probably for the same kind of crops a larger quantity of water is there used than would be required in other countries. Taking the basis of 200 acres per cubic foot per second, the Los Nietos ditches would irrigate on an average 13,400 acres.

MARIN.

POTATO BLIGHT.—*Journal*: Supervisor Rowland tells us that the blight is perceptible in nearly every potato field in the upper part of Tomales, but the crop will not be destroyed. The disease seems to triumph in spots, while other portions are not affected. Mr. Nowlin, of Marshall, says few fields in his neighborhood are showing it, though some have made no growth.

NEVADA.

RAISIN MAKING.—*Grass Valley Union*: Ex-Sheriff Perrin has for several years cured a portion of his grape crop, raised on his ranch on Wolf creek, four miles south of town, into raisins, for which he has a ready market. This year he is going more extensively into the raisin business than ever, and will cure about four tons, principally from the seedless Malaga grape, which makes a superb raisin. Mr. Perrin has a force of eight men who are engaged in picking and drying the grapes. His process is by sun drying, which he prefers to house or kiln drying. The bunches of grapes when picked are dipped in lye and then acid, which removes all surface impurities and renders the skin of the grape clean and transparent. It takes about five weeks to cure the grapes in this manner, when they are ready for boxing and shipment to market. Mr. Perrin has about 20,000 bearing vines, a large portion of them being Malaga, the balance the Mission and other varieties. Mr. Perrin will ship his entire curing of Malaga raisins direct to Eastern markets, where there is quick demand for them.

SAN DIEGO.

FIGS.—*Union*: Mr. Geo. C. Swan, of Paradise valley, has placed on our table specimens of a new drying fig, imported from Europe a few years ago by a gentleman in the northern part of the State, by whom it is considered the choicest fig in Europe. The trees in Mr. Swan's orchard have now borne fruit two seasons, and it fully sustains the high commendation given it. It is a beautiful white fig, and has a very delicate and agreeable aroma, as well as a most delicious flavor. It is not only a choice drying fig, but the finest table fig, taken ripe from the tree, that we have tasted this season. It is bound to be a success here.

SAN BERNARDINO.

RIVERSIDE RAISINS.—*Press*, Oct. 3: Last year, results were very favorable and our most careful raisin-makers realized from two to four hundred dollars per acre for their crop. This year the price opens well, and as to quantity we hear from all sides that there will be a large increase. Many think they will have double the number of boxes they had last year and some estimate it at three times the amount. There are many vineyards coming into bearing this year for the first time. One gentleman who had

none last season will have 85 boxes this. In regard to quality we are happy to state that the present outlook is highly favorable. Last fall was so exceptionally warm and dry that many thought the chances were that it would turn out differently this season. But so far (and many grapes are already cured) a better season could hardly be imagined. With one exception there has been no fog, and the days have been mildly warm and the nights cool, but dry. In some isolated cases where vines were trellised or arboresc the heavy growth of wood and leaves has caused the grapes to mildew; but this is only in rare cases, the majority of trellised vines being all right. The Muscat grapes which have been grown this summer are usually very large and fine, and the raisins made from them look and taste magnificent. Our older vines are now bearing from 10 to 50 pounds of grapes apiece—those on trellis much more than this; these are worth two cents a pound fresh picked, but the demand is limited.

SONOMA.

THE RAIN.—*Healdsburg Flag*, Oct. 3: Quite a steady rain set in last Friday and continued with few breaks up to Sunday evening, using up the dry feed remaining on the hills, and rendering some of the mountain roads too soft for heavy teams. It will, however, sprout new grass, which, if more rain comes at opportune intervals, will be a great blessing. Following is the fall as recorded by the gauge at the Alexander Academy: For the week 1.20 inches, (which is unusually heavy); for the season, 1.65 inches.

STANISLAUS.

THE NEXT FAIR.—*Modesto Herald*: At a meeting of the Board of Directors of the Agricultural society held Tuesday, it was decided to hold the next fair a week earlier than that of this year, from the 18th to the 22d of September. The society have come out ahead on the late fair about \$1,600 to \$1,700, which will just about clear off all past debts, outstanding notes, etc., leaving the society out of debt and on a substantial basis. It has been a practice every year for exhibitors winning premiums to donate them back to the society, or at least with a number of the exhibitors, a generosity which has helped them out considerably, and which is a very commendable one.

YOLO.

VALUABLE FARMING LAND.—*Democrat*, Oct. 5: It is not generally known that the average price of land in Yolo county is higher than in any other county in California, except San Francisco and the counties almost immediately adjoining of Alameda, Marin, San Mateo, Santa Clara and Santa Cruz, and this notwithstanding she has within her limits some 300,000 acres of tule land along her eastern border, and as much more mountain land on the west side, but it is nevertheless a fact. Yolo will be the banner county for valuable land in the State. These are facts, proven by figures. No wonder her lands are being much sought after. We are proud of Yolo.

Colorado.

CHEESE GOING ABROAD.—*Denver Farmer*: Mr. Gwillim, proprietor of the Monument cheese factory, shipped this week to Cardiff, Wales, 20,000 pounds of cheese which he had sold by sample at prices that were remunerative, and satisfactory to him. Last summer Mr. Gwillim's brother, from Wales, visited this State, and was so favorably impressed with the excellence of this cheese, that on his return home he took with him a few hundred pounds of Colorado cheese, and it created such a favorable impression among dealers there that they made Mr. G. an offer for all he had. Although Colorado and Wales are a long way apart, yet Mr. Gwillim, by the assistance of Gen. D. C. Dodge, general freight and passenger agent of the D. & R. G. R. R., succeeded in getting the exceedingly low rate of \$2.06 per hundred, to Liverpool.

A BONY RIVER.—In Dublin there is a warehouse of a bone mill which contains several 1,000 tons of fossils of the Jurassic period—teeth, vertebrae, fibula, jaws and limb bones, which are thrown indiscriminately into the mill, which is of enormous power, to crush the harder than flint petrified bones. These are dredged up from the river Bull, in North Carolina, the largest deposit of fossil remains ever discovered. For fifty miles the river runs through petrified bones. They are first loosened by enormous crowbars worked on the principle of pile drivers, and then dredged up. This river yields several 100,000 tons of fossil bones each year.

AN IMPROVED LEVEL.—J. B. Dancer, of Manchester, England, has made some improvements in the dumpy level for surveyors. He rejects the ordinary spider lines and places in their stead a transparent crystal plate firmly fixed on the diaphragm, upon which fine lines are drawn with a diamond point. The brass tube containing the level is double, the outer one being loose. When turned around it protects the glass tube when the instrument is carried about. The eye-pieces are made to focus accurately and easily on the cross lines by making one tube screw into another.

LITERARY NOTE.—The good things promised in the October *Popular Science Monthly* will be soon ready. The number will open with an illustrated popular article by Prof. J. S. Newberry, of Columbia College, on "The Geological History of New York Island and Harbor," and will also contain articles by Bain, Huxley, Spencer, Kirkwood, Brooks, and other eminent home and foreign writers.

News in Brief.

INDIAN raid in Nebraska.
NEGRO insurrection in Jamaica.
YELLOW fever symptoms in Madrid.
CYPRUS already has a newspaper, the *Cyprus*.
DESTRUCTIVE hurricane in Hayti, September 25th.

THE rinderpest has appeared in Northumberland.

COLORADO election gave the Republicans 3,000 majority.

THE sale of mushrooms in the City of Mexico is prohibited.

LAYARD is to discuss in London the British policy in the East.

ABOUT 400 Tyrolean emigrants have lately settled in Guatemala.

IN some fields near Ukiah the yield of hops is nearly a ton per acre.

BARK *Lady Head* carries 18,000 cases Fraser river salmon to London.

COLORADO boasts a real living glacier on the celebrated Wind River Peak.

ON November 5th, Washington Territory will vote on their new constitution.

THE Louisiana orange crop bids fair to be the largest and finest ever known.

THE Bosnian insurgents have abandoned open resistance to the Austrians.

RUMORED that the Ameer is collecting his forces to resist the English advance on Cahul.

THE total loss suffered by Austrian troops in Bosnia and Herzegovina has been about 4,000 men.

BANK OF GLASGOW has failed for \$50,000,000.

Too much credit to favored parties, one of the causes.

SIR FRANCIS GRANT, President of the Royal Academy, died suddenly in London on the 5th inst.

LARGE prairie fires reported in Red River of the North valley. Thousands of tons of hay destroyed.

IT is rumored that General Crook's pay-master has been robbed of \$75,000 greenbacks by road agents.

IT is estimated that the stockholders of the City of Glasgow Bank must meet a deficit of \$20,000,000.

MONTANA has contributed \$10,000 towards the Southern seourge fund; Utah, by latest reports, \$6,600.

THE newshoys and bootblacks of Cincinnati gave their earnings for one day to the yellow fever sufferers.

IT has been decided that the Utah and Oregon railroad may legally pass through the Bannack Indian Reservation.

A COMMISSIONER is to be sent from San Francisco to New York to study means adopted there to prevent election frauds.

SMITH, Fleming & Co., East India merchants, Leadenhall street, E. C., London, have failed. Liabilities, several millions of dollars.

THE Imperial Bank of Russia announces, that it holds 147,784,805 roubles in coin, against notes issued to the amount of 723,810,155.

RECEIPTS of bank notes at the Treasury Oct. 3d, for redemption were only \$100,000, the smallest amount ever received in one day.

ONE man in Riverside, San Bernardino county has no less than 20,000 orange trees planted on something over 300 acres of land.

THE Winnemucca *Silver State* says: The Humboldt river is lower than at any time since the whites settled in this part of the country.

OUT of the 313,977 acres of assessed land in San Benito county, nine individuals or firms own 181,103 acres of it, or considerably over half.

THE amount of money that France is pledged to expend to relieve her railroads and to build other public works will reach \$1,000,000,000 in 10 years.

RUMORED understanding between Russia and Roumania giving former right of passage through the Dobrudja in case of future wars with Turkey.

DURING the past season much work has been done on the Oregon and California railroad, preparing it for the heavy fall shipments of grain to Portland.

NEW YORK City wants an International Exhibition in the year 1889, to commemorate the centennial of General Washington's inauguration to the Presidency.

THE New York elevated railway has been presented by the Grand Jury as a nuisance. The reasons are the dropping of oil and cinders, escape of noxious gases, and the intolerable noise.

LONDON *Times* says of the Bank of Glasgow failure: The opinion expressed by bank managers is that a more reckless course of gambling with other people's money has never been pursued by any body of managers or directors.

OF 8,291 volumes circulated last month by a San Francisco library, 6,631 are classed as romances, 243 as history, 222 as magazines, 200 as poetry and the drama, 244 as biography, 259 as travels, 238 as science and art, 20 as theology, and 234 as belles lettres.

JOHN SPANGLER of Marysville, Cal., wishes to learn the present residence of his sister, Mrs. Andy Dodge. When last heard from in 1858 she was living at Shaw's Flat, Tuolumne county, Cal. Any information leading to her discovery will be thankfully received by him.

THOUSANDS of acres of the most fertile lands along the banks of Skipanon creek, Clatsop county, Oregon, are about to be reclaimed from the tides by means of diking. Several hundred acres have already been so reclaimed, and the land is making excellent pasturage.



Bedtime.

When the lamps were lit for the evening, and the shutters were fastened tight, And the room where the household gathered was cosy and warm and bright, When the bustle of work was over, and the children were tired of play, It seemed to us that our bedtime was the pleasantest part of the day.

For grandmother had her knitting; click, clack! would the needles go; The baby was snug in the cradle, and mother had time to sew; And we, in our little night gowns, would clamber on father's knee, And sheltered within his loving arms were as happy as we could be.

He could not sing; but he whistled a tune that was sure to keep The little ones very quiet, and put the baby to sleep; And whenever I want a lullaby, the sweetest I ever shall know Is the one that my father always used in the beautiful long ago.

Sometimes there were apples roasted; and then there were nuts to crack; And jokes to be told, and stories that had a delicious smack; And the longer we lingered, the harder we found it to get away; For to us the children's bedtime seemed the sweetest hour of the day.

But at last the word was spoken, "Come! Come!" the mother said, In her quietest tones—"it is really time that little folks went to bed," And we, who were wide-awake as owls, and ready for any lark, With mournful step moved slowly out and into the joyless dark.

And after we were folded in slumber's serene embrace, And with the angels of dreamland were floating through fairy space, Dear father would come to our bedside, and tuck us in, oh, so tight! We'd sleep as warm as birds in a nest all through the live-long night.

And when my bedtime cometh, and the last "Good nights" are said, And with the rest of the children I go to my narrow bed, My sleep will be all the sweeter for the touch of a loving hand, And a father's smile will greet me as I enter the morning-land.

—Christian Weekly.

Farm House Chat.

[Written for the Press by MARY MOUNTAIN.]

In the "Editor's Table" of the *Popular Science Monthly* is an article, from which I am tempted to quote largely; and my friends will understand the full force of this temptation when I say that the article is headed, "Cookery and Education."

It begins with this quotation from Count Rumford: "The number of inhabitants who may be supported in any country upon its internal produce depends about as much upon the state of the *art of cookery* as upon that of agriculture; and if cookery be of so much importance, it ought certainly to be studied with the greatest care." It then goes on to say that cooking schools are springing up in this country and in England, but that England is taking the lead in organizing them as part of the national and common school system. Then follows some talk that is strong enough to stand alone; and I must give some of it, for the tremendous drubbing falls so broadly, no special kitchen will be hit harder than it deserves:

"Of the importance, the imperative necessity of this movement, there cannot be the slightest question. Our kitchens, as is perfectly notorious, are the fortified intrincements of ignorance, prejudice, irrational habits, rule-of-thumb, and mental vacuity; and the consequence is that Americans, beyond any other people, suffer the reproach of wasteful, unpalatable, unhealthy and monotonous cookery. Considering our resources, and the vaunted education and intelligence of American women, this reproach is just.

"Our kitchens are, in fact, almost abandoned to the control of low Irish, stupid negroes, and raw servile menials that pour in upon us from various foreign countries.

"And, what is worse, there is general acquiescence in this state of things, as if it were fated, and relief from it hopeless and impossible. We profess to believe in the potency of education. We are applying it to all other interests and industries, *excepting only* that fundamental art of the preparation and use of food to sustain life, which involves more of economy, enjoyment, health, spirits, and the power of effective labor, than any other subject that is formally studied in the schools.

"We abound in female seminaries, and female colleges, and high schools, and normal schools, supported by burdensome taxes, in which everything under heaven is studied, *except* that practical art which is a daily and vital necessity in every household of the land.

"If cookery is an art of civilized nations, it must improve with the advance of civilization. It is now the most backward of all the arts, and

various causes conspire to its continued neglect. "But whatever the difficulties to be overcome, the time has arrived when the advance of intelligence and the spirit of improvement must invade that last stronghold of traditional stupidity, the kitchen.

"As thought and cultivation are brought to bear upon domestic operations, they will be elevated in the common respect, and a most formidable impediment will thus be removed.

"American women have been driven out of the kitchen because of its degrading associations; but when the art of cookery becomes a matter of intelligent study, occupation will be sought and honored in this field as elsewhere.

"Cooking-schools are already in successful operation.

"They will develop and widen, so as to afford a training in the broader field of general household activity. The South Kensington Cooking-School, in London, is a normal school for training teachers to go out and take charge of other schools. It has also given us the best practical cook-book that we now have."

Attention is then called to a review of the American edition of the "Lessons in Cookery; Hand-Book of the National Training-School for Cookery"—published by Appleton & Co., New York—price \$1 50.

The review opens with the remark, that "two things closely connected are much, and justly, complained of in this country—the everlasting multiplication of cook-books, and the general badness of cookery." Then follow more than six close columns that have done my soul good to read; for though I hoped and believed that the good time would come when kitchens and cooks and cook-books would rise and reign gloriously in the land, yet there seemed little hope that the beginning would be in my own day and generation.

Is there hardly a housekeeper anywhere who has not had her own terrible tussle with a cook-book which seems to promise so much, and helps her to perform so little?

This "Hand-Book of the Training School" does not merely rattle off lists of raw material for this, that and the other, but it proposes that you shall do something, and then tells you just what to do for the first step, and the next, and the next, until there you are with a dish of nice, wholesome food fit to nourish the human body. If you are ever so stupid you can hardly avoid the good result, for you simply take step after step along a plain road, and the review says that "raw beginners go on so well that they are astonished at what they find themselves able to do." It also says that American ladies when looking over the "lessons" are apt to smile at their extreme simplicity and triviality; but it must be remembered that the difference between good and bad cooking is very much a matter of

"Attention to Trifles.

"Slight mistakes, small omissions, little things done at the wrong time, spoil dishes. American housekeepers who have real interest in home improvement and are willing to take a little pains to instruct daughters or servants in the art of cooking well, may find in this volume adequate and invaluable help. It will prove a useful text book in the cooking schools that are springing up in this country, and classes could be formed in it for kitchen practice in every seminary for young women."

All this quoting from a book review may seem very much like giving it a "free puff" and that is what we all ought to do, expecting no return but the unspoken gratitude of some bewildered housekeeper who may be led in this way to the very help she is searching for. I intend to make myself a present of the book by and by, and may then have something more to say of its method.

The Editor's Baby to be Kissed not Spanked.

Our editor was asking a few weeks ago that we should all find fault with the paper, if we felt like it, even at the risk of putting him in such a fine frenzy that he would "go straight home and spank the baby."

Instead of fault-finding it happens lately that I have had the pleasure of hearing even more than usual praise, and especially of the editorials. There was one concerning "The Personal Equation in Agriculture." It was a pretty good thing to see and hear the deep-toned satisfaction of our "Critic" as he progressed from one strong sentence to another, and the "rounds of applause" in shape of broad pencil marks that serve as "appreciation points" for the next reader.

"That is the best thing I have seen yet," said he, "and I wish every farmer in the country could read it, and then would remember it. Yes, sir; it hits the nail on the head every time, and is likely to do more good than all the Sunday sermons that will be preached to-day." Of course the marked copy was sent to Eastern friends, and we procured another to place on file. I have just been reading it again, and if others wish to warm themselves up at that honest glow, I feel a little more surely the dignity, value and genuine grandeur of "Personal Equation," they have only to turn back to the *RURAL* of August 17th.

Another in September 21st: "Where shall we put the Surplus?" ought to be framed and hung up beside the almanac; but if the wives have read it, I think they can be trusted to keep its memory green in the midst of every household. I almost think our farmers are too intelligent to be caught by the glittering snare of stock gambling; but the very earnestness of that editorial warning makes me fear there is terrible danger ahead for some of them, proba-

bly for those few who do not read the *RURAL*.

But keep the beacon fires bright, Mr. Editor, and the gratitude of farmers' wives will prompt you to go home and kiss the baby every time.

No more "Blue Monday."

I am glad Mrs. Ranher has got her pen started, and is serving up our familiar topics with plenty of fresh spice. Her plan for washing-day is excellent for those who can make their own soap, but might perhaps be further improved by soaking the clothes over night.

Thoroughly soaking the clothes is one of my hobbies; and found to be so helpful that I am always recommending it right and left. My own "Blue Monday" is no longer very blue, owing to a good method, and the brisk help of a man. Will tell all about it some other time.

Married Women's Rights in the Eastern States.

In Maine, a married woman may become possessed of real or personal property by bequest, demise, gift or purchase in her own name, and as her own property.

After marriage she still retains the custody of the property owned by her before marriage, and the same is exempt from liability for the debts of her husband.

She may sue in her own name to recover back her separate property.

In the event of her death without a will, her property, real and personal, descends to her heirs.

She has full power to make a will, which requires three witnesses.

In New Hampshire, a married woman can hold property in her own name, may make contracts, sue and be sued, and can dispose of her property by will, and in case of her death without a will, her husband is excluded from any share in her estate.

In Vermont, a married woman is entitled to the same rights of property as in New Hampshire. Wills require three subscribing witnesses.

In Massachusetts, a married woman may hold property separate from her husband without the intervention of a trustee. A deed conveying land to a married woman must be recorded within 90 days of its delivery, or the land will be liable for the husband's debts.

Any married woman over 21 years of age may dispose of her property by will, provided her husband's consent is endorsed on the will in writing. If the devise is to her husband, his consent is not necessary.

Wills must be signed in the presence of three subscribing witnesses.

In Rhode Island, a married woman is entitled to her separate estate, which is not liable for her husband's debts, nor can he control the use of it. She may dispose of it by will in presence of three subscribing witnesses.

In Connecticut, the wife is entitled to her separate estate, which she owned before marriage. The proceeds of any property granted to her after marriage is held by the husband as trustee for her and her children, and his executors must account for the same. With the consent of her husband she may dispose of her property by will, which must be signed in the presence of three witnesses.

"LYING" CLUBS.—In the last century there were several organized Lying Clubs, one of which for many years held its meetings at the "Bell Tavern," Westminster. Among the rules of this society were the following: "That whoever shall presume to speak a word of truth within the established hours of six and ten, within this worshipful society, without first saying, 'By your leave, Mr. President,' shall for every such offence forfeit one gallon of such wine as the chairman shall think fit." A coarser form of the same intellectual amusement is the custom of lying for the whetstone, which formerly obtained at village feasts in many parts of England. It was, perhaps, some popular version of the story of King Priscus' whetstone cut through by razor which caused this article to be selected as the appropriate prize; it may have been only an ingenious symbolism to express the necessary whetting of the wits; but, at any rate, it was the recognised emblem of lying, and is illustrated by a sarcasm of Lord Bacon upon Sir Kenelm Digby. The latter upon his return from the Continent, was boasting of having seen the philosopher's stone. "Perhaps," said the Lord Keeper, "it was a whetstone." At Coggeshall, in Essex, there was a famous institution of this kind. There is a story that Bishop Porteus once stopped in this town to change horses, and observing a great crowd in the streets, put his head out of window to inquire the cause. A townsman standing near replied that it was the day upon which they gave the whetstone to the biggest liar. Shocked at such depravity, the good bishop proceeded to the scene of the competition, and lectured the crowd upon the enormity of the sin, concluding this discourse with the emphatic words, "I never told a lie in my life." Whereupon the chief umpire exchanged a few words with his fellows, and approaching the carriage, said: "My lord, we unanimously adjudge you the prize!" and forthwith the highly objectionable whetstone was thrust in at the carriage window. Tradition adds, that in course of time the good-natured bishop forgot the indignity, and began to relish the joke, inasmuch as for many years the identical whetstone occupied the post of honor over the fire-place in his dining-room at Fulham.—*Old and New London*.

Be Patient with Your Wives.

Great events, many times, are the fruits of trivial causes. Matrimonial differences, even divorces, have been the consequence of a single bad dinner. Of course a husband, young or old, should have decision and firmness. He should never forget that he is the head of the household. But he should bear that scepter, as scepters should always be borne, with moderation and indulgence. Especially should the young husband bear in mind that good servants, at the present day, are the exception.

He should recur, if he is an educated man, to his knowledge of chemistry. He should remember the difficulty attending chemical experiments, and the nicety required in them, and how liable they are to fail, even in the hands of professors; then, considering that any success in cooking is a chemical achievement, he should become more appreciative of every culinary triumph, and more indulgent for miscarriages in cooking. He should not be unmindful that there are many young women who can sing (or screech), and play the piano (or pretend to), where there is one who can make a loaf of right, palatable bread.

So he should compliment his young wife's successes, and be a little forbearing with her unavoidable failures. Any woman knows how to put a batch of loaves into the oven. Only one in a thousand brings them out good bread.

Young husbands, be forbearing and patient. If you have wives who desire to be good housekeepers, it will be largely your own fault if they do not become such. A word of cheer from you costs you nothing; it avails them much. Never be forgetful of their trials and difficulties. Consider that they are on your side, and help them to win.—*Exchange*.

The Future of America.

Ralph Waldo Emerson has written a lecture on the future of our country in which he says: "Happily we are under better guidance than of statesmen. Pennsylvania coal mines, and New York shipping, and free labor, though not idealists, gravitate in the ideal direction. Nothing less large than justice can keep them in good temper. Justice satisfies everybody, and justice alone. No monopoly must be foisted in, no weak party or nationality sacrificed, no coward compromise conceded to a strong partner. Everyone of these is the seed of vice, war, and national disorganization. It is our part to carry out to the last the ends of liberty and justice. We shall stand, then, for vast interests; North and South, East and West, will be present to our minds, and our vote will be as if they voted, and we shall know that our vote secures the foundations of the State, good will, liberty and security of traffic and production, and mutual increase of good will in the great interests."

Mr. Emerson's prophecies of the fortunes of the Republic are based on his convictions of the permanence, the supremacy, and the benignity of universal laws. "Our helm is given up to a better guidance than our own; the course of events is quite too strong for any helmsman, and our own little wherry is taken in tow by the ship of the great Admiral which knows the way, and has the force to draw men and States and planets to their good." He thus sees in all directions the light breaking. In his cheerful faith, he finds that trade and government will not alone be the favored aims of mankind. Every useful, every elegant art, the height of reason, the noblest affection, the purest religion will make their home in our institutions, and write our laws for the benefit of man.

The Clean Newspaper.

There is a growing feeling in every healthy community against journals which make it their special object to minister to a perverted taste by seeking out and serving up in a seductive form disgusting scandals and licentious revelations. There is good reason to believe that the clean newspaper is more highly prized to-day than it was four or five years ago. It is also safe to predict that as people in all ranks of life, who protect their own at least from contamination, become more conscious of the pernicious influence of a certain class of journals, called enterprising because they are ambitious to serve up dirty scandals, they will be careful to see that the journals they permit to be read in the family circle are of the class that never forget the proprieties of life. Already men and women of refinement and healthy morals have made commendable efforts to counteract the same by causing sound literature to be published and sold at popular prices. These efforts are working a silent but sure revolution. The best authors are more generally read to-day than at any previous date. The sickly, sentimental story paper and the wild ranger and pirate story book are slowly but surely yielding the field to worthier claimants. To the praise of the decent newspaper it may be said that where it has a place in the family, and has been read for years by the young as well as old, it has developed such a healthy tone and such a discriminating taste that the literature of the slums has no admirers. Fortunately, the number of such families is increasing in the land, and as they increase, the journal that devotes itself to sickening revelations of immorality will be compelled to find its supporters solely among the classes who practice vice and crime or are ambitious to learn to follow such ways.—*Exchange*.

Chaff.

THE latest song is: "Mary, don't crowd me, I'm melting."

GRANT has taken to dry goods—ruching, with the Czar for a partner.

MENDOCINO Chinamen have been civilized to the extent of two law suits about one bed-quilt.

MARTINS fly higher now than they did years ago. Probably general inflation predicated.

NEVADA Indians say that the border troubles are "all same stage robber. Indians not all bad."

WHY does hash never appear on a hotel bill of fare, but always on the table. Give it up?

EVERYTHING has reached bottom now but the artesian well question, and it is horing the people still.

EARNEST Morris, the boy explorer, only wants \$700 to go through South America. Wouldn't he be cheaper than Stanley.

MR. RORY has absconded from Montreal because he was fearfully in debt, and no one would let Rory owe more.

Ir having been stated that none of the boatmen could pull a sunstroke, it is suggested that that depends on the skull.

THE latest improvement on humanity is that suggested by a country carpenter. He wants to be upholstered while laying shingles.

CORONERS are in doubt whether to hold an inquest on a negro boy or on a watermelon. One is generally the death of the other.

A BURGLAR blew open a Sandy Creek, N. Y., safe, and got one Mexican dollar. He has exported it to China to pay for his washing.

IN Nevada cottonwood telegraph poles have sprouted and are making a nice line of trees. We may expect telegrams announcing a rise in cotton soon.

MOUNT ARARAT is to be transported to New York to offset Cleopatra's needle in London. Chicago can only fall back on Mt. Vesuvius or the North Pole.

AN old bachelor said he once fell in love with a young lady, but abandoned all idea of marrying her when he found that she and all her family were opposed to it.

DEA PILKINS said to himself: "Falstaff asks 'What's honor?' As though it was hard to tell. But let my wife sit behind another woman in church, and she'll tell what's on her in less than two minutes."

MISS GEORGIA CLIFFORD of Tilton, New Hampshire, a student at the Methodist Conference Seminary, recently unloaded six racks of hay with the thermometer oscillating around 100. If our mother's boy had been thereabout, he'd have been son-struck.

IN California they can't get a horse to go anywhere without giving him two hits.—*Boston Post*. But with two bits they doubtless go "real" well.—*Graphic*. If you were on some of them you'd want four bits to stay there, and probably be a bit off before you were through.

CONVERSATION between an inquiring stranger and a steamboat pilot: "That is Black Mountain?" "Yes, sir, highest mountain above Lake George." "Any legend or story connected with that mountain?" "Lots of 'em. Two lovers went up that mountain once and never came back again." "Indeed! Why, what became of them?" "Went down on the other side!"

SOME mischievous boys at a village academy, seeing a sign over a grocery which read "Arnold Drinkright," painted out the first three letters, leaving it "Old Drinkright." The sign was soon restored to its former condition, and then the boys painted a D before the first name, making it "Darnold Drinkright." And then the grocer in despair painted the name out.

LITERARY young man at a party: "Miss Jones, have you seen Crabbe's Tales?" Young lady scornfully: "I was not aware that crabs had tails." Literary young man, covered with confusion: "I beg your pardon, ma'am; I should have said, read Crabbe's Tales!" Young lady, angrily scornful: "And I was not aware that red crabs had tails either." Exit young man.

JOHN GUNN stood by the stove at school with his mouth full of water. Jimmy Cross snapped his cheek and Johnny let the water fly. Teacher calls Johnny up. "Johnny, why did you spit water over your comrades?" "Please, sir, I couldn't help it; Jim Cross snapped me." "James, did you snap John Gunn?" "Yes, sir; but I didn't know he was loaded." Verdict—accidental shooting.

BARBER—"How long ago did you have your hair cut?" Customer—"About three months ago." Barber—"Awful bad cut. Who cut it?" Customer—"You did." Silence of ten minutes. Barber (having somewhat recovered his nerve) "I see that your chin has been cut by the last barber that shaved you?" Customer—"Yes." Barber—"You ought to have built a head on him bigger'n a mule." Customer—"I did." Barber continues to shave with great care.

AN intelligent farmer living in Des Moines county has invented a henophone, modeled on the principle of the telephone, by which one old reliable hen occupying a central office in the henery, sits on all the nests about the establishments, leaving other fowls free to lay eggs, scratch and cackle. As fast as a new nest contains the full complement of eggs, it is connected with the central office by a copper wire and the business is settled. The only trouble with the machine is that it sits so hard it hatches out the porcelain nest eggs along with the others, so that one chick in every nest is born with glass eyes, and the farmer has to buy and train a dog to lead it around. This makes it expensive.—*Burlington Hawk-Eye*.

Young Folks' Column.

Johnnie's Thumb.

[Written for the RURAL PRESS by JERIGH ARRIL.]

Our Johnnie broke his right-hand thumb,
By falling o'er his kettle drum.
His mother tried to keep him numb,
By poulticing with bread and rum,
And tying with a yellow thumb.

He said he could not do his sum,
Because his fingers were so numb;
Yet on the organ he would strum,
As though he did not care a crumb.

John loves to stand beside the gumb,
And hear the busy bees go—humb;
But when they sting him, he is glumb,
And makes complaint with voice so grumb.

One day he fell into a lumb,
And would have drowned had he not swumb,
And kept his head above the scumb,
Which spread the pool so like a stumb.

It nearly struck his mother dumb,
To see him covered o'er with slumb;
And so she gave him sugar plumb,
And lots of scented chewing gumb.

Now all this nonsense I will sum,
And give the wise this question plumb:
Why should not scrub and scrub and gumb,
Be spelled the same as Johnnie's thumb?

A Talk with Farmer Boys.

[Written for the PACIFIC RURAL PRESS by JERIGH ARRIL.]

I always did like farming. When a boy, I wished to stay home from the summer school that I might help my brothers on the farm. And when I had grown up, and went to the academy in summer and taught school in winter, I was counted a full hand on the farm during the spring and fall vacations. Often the threshing machine was engaged to come the very day that I was expected back from the academy, and my part was to pitch bundles from the mow or to cut the bands.

I am an old man now, but I never lost my interest in farming. I advise all farmer boys to stick to the farm as long as the people will let them. There is no calling which gives them better opportunity to become well informed on almost every subject, and there is no other calling in which they can put to good use so varied and such extensive knowledge.

But farming now is not what it was in my early days. I dressed the flax from which my jumper was made. I used the scythe, the cradle and the hand rake. I sowed from a sack slung over my shoulder, and bound the crop by hand, and horses tramped out the grain for me. Now you ride on your gang-plow and your horse drill or your broadcast sower, or on your mower, and your reaper, with the self-binding attachment. You thresh by steam as many sacks in a day as I could thresh pounds. With your large shears you can prune as many big limbs in a minute as I could saw off in half an hour.

But in one thing you have but little advantage over me, that is in learning to spell. You cannot learn to spell any quicker, nor write any faster than boys did 50 years ago. You have to spell p-h-t-h-i-s-i-c just as I did. It is true we have improved a little on the plough of my boyhood, yet the mistletoe bough is just as rough to handle as ever. Though your mother may have a tough cough, she must still put her hand and pen to the dough just as my mother did. You cannot tell the value of a single letter by itself any better than I could. You cannot tell how to pronounce r-e-a-d, until you notice the words before or after it; and a t on the end of t-h-o-u-g-h changes the sound of every letter in the word, just as it used to do. You still use a to represent seven different sounds, and have to learn 40 different characters and combinations of characters to represent those seven sounds of a.

Young America may glory in her photographs, her railroads, her telegraphs, her telephones, her sewing machines, and 50 other methods of making one man equal to 20 or even 100; but when it comes to spelling English, they all come down to the old level and learn by rote, just like "pretty Poll." They all have to master about 200 ways of representing the 42 sounds of the language.

Here is the link holding them to the past, to the age of their grandmothers, with their flint and steel and tinder-box, and their little spinning-wheel. In this matter of spelling, my boys, fashion holds you at a standstill. You can't crow over your grandfather here. You may take your friction match and kerosene and laugh at his tinder-box and tallow dip, but you spend years in learning to spell just as he did, and what is more, you think that his way in this matter is the best way still.

Go on then with your improvements and labor-saving appliances, laugh at me for putting a stone in one end of the bag to balance the grist, you cannot get ahead of me in spelling.

"I suppose," said little five-years-old, in her quiet, thoughtful way, "I suppose there are men under ground that push up the flowers, don't you, mamma?"

A ONE-POUND baby has been born in Philadelphia. They had provided an iron cradle with teak backing.

GOOD HEALTH.

The Hygiene of Schoolhouses.

In the course of an article on this important subject, a writer in the New York *Independent* makes the following remarks: Great risks and great exposures to the body are involved in sending a child to school. It may mean merely such mind work as is too much of a tax upon the brain and nervous system. It often involves sitting in constrained positions too long, too close confinement in ill-ventilated or ill-heated rooms, and other experiences inimical to vigorous growth. A recent book says the first right of a child at school is to feel happy. One element in this is left out if the conditions are not such as favor his good health. Indisposition is a word of double meaning. That of the mind and temper are affected by that of the body.

There are most cogent reasons why children at school should be so provided for as that all their surroundings tend to a comfortable physical condition. Simon, speaking of artisans, says "that it is their right that whatever work their employer assembles them to do should, as far as is in his power, be divested of all unhealthy circumstances." It is a poor charity, and a poor economy, too, for the State to present to all its children a free-school system, if the perils of the school-room are excessive.

No school should commence without a thorough knowledge on the part of its trustees as to the adequacy of the building, its desks, its heating and other apparatus, its general fitness for the conduct of the work purposed to be done in it. We wish the parents of the children would just now form themselves into a committee of the whole, and wait upon each board and find out just what they know as to sanitary inspection.

The room and building must have excellent janitorship, so that it can be well dusted, cleansed and aired in the hours of its emptiness. How imperfectly is this work done in most schools. There is poor housekeeping, and that always makes trouble.

Have the boys and girls fitted to their respective desks; not only with a view to convenience, but size. Often the blackboards are so located that the child must face a glare of light. Often the desks are so close to them that they cannot adjust distance to capacity of vision. Virchow, Loring, Agnew, and others have well pointed out some of these defects.

Laws of posture, both in sitting and standing, are greatly overlooked in schools, and slight spinal deflections from the natural line give future aid to one-sidedness. Brown-Sequard has noted and explained how the use of one side too much and the other too little often disturbs bilateral sensibility and leads to nervous trouble.

Dr. Seignin read an interesting essay on "Nervous Diseases as Fostered by School Life" before the last National Medical Association, and claims that physical considerations must enter far more largely into our system of instruction. Anemometers and thermometers can now tell us much as to air currents and the heat and degree of moisture of the air, while chemistry has ready aids to show us whether it is contaminated. Pale faces and puffy forms and the tired look of the homeward group sometimes make us stand aghast when they tell us: "This is education." Ten minutes of calisthenics in a close room or an occasional antic of the gymnast will not recover the unnecessary wear and tear to which our children are too often subjected, because of unavoidable conditions in many of our public and some of our private schools. We ask all parents, all school-boards, and all teachers to put on their thinking-caps at once, and keep them on all this term, in the school-health interests of the boys and girls.

LIFE STUDIES.—A writer in an English magazine studies from birth to death the march of an English generation through life, basing his remarks on the annual report of the Registrar General. The author singles out, in imagination, a generation of one million souls, and finds that of these more than one-fourth die before they reach five years of age. During the next five years the deaths number less than one-seventh of those in the first quinquennium. From ten to fifteen, the average mortality is lower than at any other period. From fifteen to twenty the number of deaths increase again, especially among women. At this period, the influence of dangerous occupations begins to be seen in the death rate. Fully eight times as many men as women die violent deaths. The number of such deaths continues to rise from twenty to twenty-five, and keeps high for at least twenty years. Consumption is prevalent and fatal from twenty to forty-five, and is responsible for nearly half the deaths. From thirty-five to forty-five the effects of wear and tear begin to appear, and many persons succumb to diseases of the important internal organs. By fifty-five the imagined million has dwindled down to less than one-half, or 421,115. After this the death-rate increases more rapidly. At seventy-five there remain 161,124, and at eighty-five 38,565. Only 202 reach the age of one hundred. At fifty-three the number of men and women surviving is about equal, but from fifty-five onward the women exceed the men.

DOMESTIC ECONOMY.

FRAUDS IN GRAHAM FLOUR.—The St. Louis *Trade-Journal* calls attention to the fact that graham flour is rapidly coming to be as much an article of suspicion as ground coffee or spices, or any of the thousand and one adulterations that are daily practiced. The commonest form in which graham flour is seen is that made from a medium or poor class wheat, and while not properly adulteration, it may be characterized as swindling of the meanest kind, for the reason that the product is largely used by dyspeptics, and others in imperfect health. Graham flour, properly made, is nearly as costly an article as bolted flour ground from the same wheat, and, therefore, when you are offered graham at much less than the best bolted flour, you are being victimized—it is either adulterated or it is made from inferior wheat. A common form of adulteration that is practiced by at least one retail flour dealer in this city, is to take a barrel of flour costing about \$5, add to it about 60 lbs of bran, 25 pounds middlings, and the same quantity of corn meal. The result of the mixture is 306 pounds of stuff costing about \$6.45, or a fraction over 2 cents a pound; while graham flour, made from the best wheat, cannot be sold now at less than 3½ to 4 cents a pound. And yet this vile stuff is being swallowed by people in search of better health, when they would do about as well on a diet of hot white biscuit.

NEW METHOD OF PRESERVING FRUITS.—A foreign chemist has published a new method of preserving fruit which deserves a trial on a small scale, as it is so simple, yet it is said to be perfect in the preservation of the peculiar and original flavor. We have never tried, and therefore propose it only for those who are of an experimental turn of mind. "Wash the specimens clean after gathering, and place in vessels of fluid composed of 200 to 300 grains of sugar to one liter of pure water, and 2½ grains to 3 grains of salicylic acid. The pots or bottles, with their contents, are then closely covered with common writing paper, and so kept in a moderate temperature, as any excess of warmth would cause too great an evaporation of the water. In this way the professor has found by experience that plums, cherries, apricots, peaches, grapes, strawberries, etc., can be preserved in good, sound condition for a whole year, each fruit retaining its original and peculiar flavor as fine as when gathered."

OMELETTE SOUFFLEE, (Fried)—Six eggs—the whites and yolks beaten separately—two tablespoonfuls of powdered sugar added to the yolks, beating thoroughly until they are smooth and thick; beat the whites to a stiff froth; put two tablespoonfuls of butter in a frying-pan; heat to boiling, and when you have added one teaspoonful of vanilla extract to the whites and yolks, mixed, pour the whole into the pan of hot butter, and cook quickly as you would a plain omelette; slip the cake turner frequently under it to loosen from the sides and bottom, as it is more apt to scorch than an omelette unsweetened; turn out upon a hot dish; sift powdered sugar over it; serve at once, or it will fall and become heavy.

SPICED TOMATOES.—Take two pounds nice, ripe tomatoes, one pound of brown sugar, half a pint of good cider vinegar, one dozen cloves and two dozen grains of allspice. Put these ingredients into a preserving kettle and stew them over a slow fire. When they have been down sufficiently long to cook the tomatoes pretty well, take them up and place them on a dish to cool, but continue boiling the syrup slowly. When the tomatoes become cool put them back into the syrup and boil them until they are of a dark-red color, and then take them out again, put them on a dish to cool and continue boiling until it is as thick as molasses. When the tomatoes and syrup are both cool put them in jars and tightly seal.

VEGETABLE SOUP.—Seven ounces of carrots, seven ounces parsnips, ten ounces of potatoes cut in thin slices, one and one-quarter ounce of butter, five teaspoonfuls of flour, a teaspoonful of made mustard, salt and pepper to taste, the yolks of two eggs, rather more than two quarts of water; boil the vegetables in the water two and one-half hours; stir them often, and if the water boils away too quickly add more, as there should be two quarts of soup when done. Mix up in a basin the butter and flour, mustard, salt and pepper, with a teacupful of cold water; stir in the soup and boil ten minutes. Have ready the yolks of the eggs in the tureen; pour on, stir well and serve. Time, three hours. Sufficient for eight persons.

OLD newspapers are useful in many ways. Under carpets they save wear and keep the floor warmer by covering cracks. Over the edge of each step, under stair carpets, they are almost indispensable, and serve a better purpose than clumsy carpet pads. A newspaper folded across the chest and buttoned under the outer garments, protects the lungs in a long, cold ride. Newspapers are equal to chamois skin for rubbing windows after they are washed and wiped. Zinc under stoves is better polished by rubbing with dry paper than by washing. Dampened paper is good to rub up and brighten the kitchen stove.



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SAN FRANCISCO:

Saturday, October 12, 1878.

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The Week.

It has been a week of peerless loveliness in sky, and air, and the landscape. The days have been busily employed in pushing forward the threshing of grain which still lies exposed and challenging the elements. Raisin drying is now well under way. Already the first crop is appearing in the market and promises to do well in price, as all good fruit of last year's curing was clear from the path of the new crop. Our raisin production is increasing most gratifyingly. New producers are enrolling themselves, and old ones who have the right grapes and have properly cured and packed the raisins are increasing their products. This is surety that the industry is passing from experimental into permanent phases. We expect that this year's fruit, in view of its own excellence and the shortage in the Malaga crop, will find its way into many new markets and thus build up the commercial opportunity evenly with the production.

In regions of the State where dry plowing and seeding have been found conducive to good results, men and teams are busily engaged in turning the furrow. A considerable area is already sown, and the seed thus placed where the earliest rains will be turned to account. There are now indications of a downpour lurking in air, but, so far as human judgment goes, it would be better if the willing clouds should restrain their weeping for a season.

The Line of Beauty.

If rarity be an element of beauty then, we are loth to confess it, the line of beauty in the morals, the politics, the business and the finances of the day, must be a straight line. The fact is that our courses in every day affairs are so pushed hither and thither by pursuit of individual interests and so bent by allegiance to policies, that our thoughts, ideas and even our consciences run along in compound curves. And yet there is such a thing as straightforward, absolute right.

Orators have reason to thank some old Russian emperor for one of their most telling illustrations. This son of the north had, it is said, need of a road from St. Petersburg to Moscow, over which he could move armies and munitions of war in a most expeditious manner. This fact he stated to his engineers and instructed them to map out the road at once. The map was soon completed and the engineers proceeded to explain to his majesty what a fine road they had laid out. He looked upon the paper and saw the line traced hither and thither across it: "Is that a road from St. Petersburg to Moscow?" asked the emperor. "Yes, Sire," was the reply, "we start here at St. Petersburg, we swerve at this point a little to the left to pass through this important town, and there to the right, to make that important connection and so on, until we reach Moscow." The emperor seized the paper with an expression of displeasure. "Here," he cried, "is St. Petersburg; there is Moscow," and, running his finger straight from one to the other, until his nail cut quite through the paper, he exclaimed: "That is the road I want; hild me that road."

The events of the day teem with instances to prove that we are planning our thoughts and our conduct upon the idea of the Russian engineers. Straightforward right is still regarded as a lofty principle of action, but when men speak of it, it is as one sighs for departed. It is pronounced "impracticable" and "behind the times," and in its stead we are regaled with accounts of official boomerang-throwing for personal aggrandizement, and of laws made, not for the principle of justice which they embody, but for the benefit of certain classes of our population. And yet common as these moral obliquities have become, and general as is the praise, and mild the condemnation of those who are profited by them, there is the old idea of straightforward uprightness, honesty, truth and justice, still lurking in our breasts; almost apologizing for its existence.

Is it not time this crushed and downtrodden principle of absolute right was called from its exile and placed again upon its throne in the hearts of men? What has the base usurper of its honored place given us that we should longer fawn upon it? Is not the public mind surfeited with the daily record of faithlessness to public trusts? Is it not enough that almost every State in the Union has its own list of lofty rascals to contemplate? Does California need more? A pistol shot awakened the city of San Francisco to the consciousness that it had a third of a million dollars in the hands of a man, who was known to be a gambler in the stock market, and a two weeks' official inquiry has failed to discover what has become of the money, except such parts of it as are recorded as gamblers' stakes. Another pistol shot awakened a trust company, known as a savings bank, to the fact that its managing officer had appropriated a third of a million in his individual ventures, and led the bank commissioners to report that the "bank" should be closed or else all its managers and employes be replaced by other men. Do we need more of these outrages of public trusts to remind us that the path of right and duty is a straight line, and that all these curves and tangents, which men in high trusts have shot out upon in the hope of individual fortunes, are naught but byways leading to hideous crimes? Surely it is time these evil tendencies of the day were called by their right names, and these elegant robbers of poor and confiding people were held in such high execration that their example would be a public warning for all time.

The State of California now occupies the position of the Russian emperor. It has called together its engineers at Sacramento. It demands from them the drafting of a Constitution which shall embody this idea of absolute right and even-handed justice. Statutes bear upon their face the taint of class legislation and individual greed. The lines of taxation, corporate powers

and administration of law and justice have been mapped out so that they turn hither and thither, as special interests demand, instead of running in direct lines from the individual to the State. The Convention at Sacramento is charged with the tracing of straight roads, and this can only be accomplished by making absolute right the test of all measures which are proposed to them. If they labor with the idea of classes and interests uppermost in their minds, they will fail. The people demand of them the discernment and affirmation of the principles of exact and lofty justice, that the people may have anegis of protection for their rights, and the courts a standard by which to determine the truth of legislative enactments. There is nothing higher in the State's existence than the Constitution. If this be just to all, and then if there can be found some way to awaken proper regard for straightforward, uncompromising honesty, and proper execration for all success gained by dishonest means, how direct, how true, how beautiful would be the line of our advancing prosperity.

The French Treaty and Our Productive Interests.

We own we never could quite understand why it was our Chamber of Commerce fell in so quickly with the treaty schemes which the clever Frenchman, M. Chotteau, announced in this city some months ago. Whether they only intended to give the foreign gentleman a most courteous reception, and unwittingly gave him material to use against our productive interests, or whether, as merchants, they only caught one idea, and that is, that the smoother the path for the introduction of commodities the easier the trade. However this may be it matters little, for our wine producers are moving vigorously to counteract whatever of prestige the treaty-bearer gained from his San Francisco endorsement, and to place the wine interests before the country in its true light. At least three notable meetings have been held—the first at St. Helena, the second in this city, and the third at Los Angeles—at all of which action was taken showing that the proposed treaty with France would be fatal to our growing wine interest, and hand over to the French all the advantage in the contest which we have been waging with them, with the hope of victory for our side. At the San Francisco meeting of the State Vinicultural Society, in addition to affirming the right of the industry to a continuance of the government protection under which it has grown thus far, measures were taken to enlist all vine-growers' societies throughout the country in a united effort to show up the proposed treaty in its true light as affecting our productive interests. We cannot but believe that the direction of public attention to the matter will prevent the ratification of the proposed treaty; for although we have a high idea of the French as producers of different articles, we do not want any more of their low grade wines in this country, nor do we want their free competition in the markets which we are endeavoring to build up in this country for California dried fruit and other local productions. We pay the French enough money already for articles which our producers should supply. There is every reason why the amount should not be increased. All our future in some lines of production, which we are now developing, depends upon the fostering which is now received at the hands of the government.

MOUNTAIN FRUIT.—Some of the finest mountain fruit we ever saw was lately sent down by Mr. Ezra Dane, of Sonora, Tuolumne county, to his daughter at Washington College. The size, fragrance and flavor of the peaches, the size, sweetness and dazzling transparency of the Muscats, and the high polish upon the mammoth clusters of the Black Hamburg, all win one to longings for the mountains. Mr. Dane's place in Sonora has been famous for years for its rich fruit of various kinds, and we are glad to see that none of its old charms are lost.

SAN JOSE FAIR.—Bennett, Patterson & Co., exhibit mantels made of oak cut and stored by James Lick 25 years ago, and bought by them at public sale. Also a handsome display of household, church, school and office furniture.

ON FILE.—"Gathering Pears," M. P. O.; "Sabbath Morn," J. T.; "Santa Barbara County," B. W. C.; "Santa Clara County," A. C. K.

QUERIES AND REPLIES.

Rust on Rye Grass and Mangles.

EDITORS PRESS:—I inclose herein a sample of rye grass, very badly rusted, that you may see that the fungus by no means restricts its ravages to wheat. The growth of my crop of mangles has also been much retarded this year, presumably also by rust, the under leaves being not only discolored and dusted with the spores, but in spots eaten through, as is the outer layer of the stem of inclosed rye grass.—E. BERWICK.

The specimens show under the microscope not only the "rust" but also a touch of "smut." The "rust" fungus (*Puccinia graminis*) is known to be somewhat impartial in its choice of a foster plant and, as we have stated in a former paragraph upon the subject, passes certain stages of its existence upon other plants than the grass or grain family. We do not remember to have heard of its attacking mangel wurzel, although we have no doubt our correspondent is right in detecting the presence of its spores. The holes, which we understand from the note above, are quite through the substance of the leaf, we should like to examine. It may be that some other agency is concerned in them. A beet leaf will be received and examined with interest if our correspondent will favor us.

Fresno County Raisins.

EDITORS PRESS:—I take pleasure in sending you a little sample box of the first raisins made in the California Central Colony, from vines only two years from the cuttings. They are Muscat of Alexandria.—M. F. AUSTIN, Fresno, Cal.

The raisins are highly creditable to the locality from whence they come, and to the enterprise of our correspondent and others in determining the capabilities of the place by actual test. The raisins are of very good appearance, true flavor, and are neatly packed. The precocity of vines in Fresno is thus proved, as it has been proved of fruit and other trees. Another year will doubtless give a little larger size to the berry, and then the raisins will rank with the best that come to the market. We learn from the *Expositor* that quite a number of the colonists are busily engaged in curing and packing raisins. D. D. Hudson will have about thirty boxes of raisins from two years' old vines, and Mrs. J. A. F. Smith will have a large quantity. We understand that R. B. Blowers, of Yolo county, is teaching a man the whole science of grape raising and raisin curing, so far as he knows it, and after the man is thoroughly posted he is to take charge of the grape and raisin business at Mrs. Smith's place.

Alfalfa and Dodder.

EDITORS PRESS:—I did not try Mr. Dwinelle's proposed remedy of working in straw among the young alfalfa, and then firing it. The proposal implied too much work, and the chance of killing two birds with one stone. I preferred plowing under both alfalfa and dodder. After a few weeks, as the ground was moist, a great many shoots of alfalfa appeared from the old roots, and, to my great disgust, almost simultaneously the long saffron tendrils of the dodder met my gaze. I then sent a man through with a sharp hoe to cut up the dodder-embraced alfalfa, and for a week or so I thought the dodder was exterminated; bunches of saffron, however, soon diversified the prevailing green, and on pulling samples, I found bunches of dodder, roots and tendrils, as high as eggs, clustering round the buried alfalfa. The moral is: Only buy alfalfa seed that is warranted "free from dodder."—E. BERWICK, Carmel, Monterey Co., Cal.

Treatment for Foot Disease in Turkeys.

EDITORS PRESS:—As there is much complaint of foot disease among young turkeys this season, I will report to you that two of my neighbors have told me that when the disease prevailed in this locality several years ago, they found that dipping the feet in a strong decoction of tobacco cured them. The liquid was used cold, but I think it might be more positively efficacious if used at blood heat. It is so when used for scab on sheep. I would suggest as a convenient mode of application, gathering the fowls in a pen and running them out through a narrow passage in which the liquid is set in shallow pans for them to wade through. I know nothing of the disease nor its remedy from personal observation, but the source from which this report comes I consider reliable.—MARTIN WILCOX, Reservation, Tehama Co., Cal.

Cutting Bermuda Grass.

EDITORS PRESS:—Will you please tell me through your columns whether it is possible to cut Bermuda, or Sandwich Island, grass with a lawn mower, and what patent is to be used? I have a law of that grass and no way of cutting it, as a scythe will not do it effectively. I have no way of testing a lawn mower without buying one, and am told by some that a mower will not, by others that it will cut it.—SUBSCRIBER, Santa Monica, Cal.

Will some one who has done the work which

troubles our querist answer the above? We have had no experience with the grass, but we should think a good lawn mower would be just the implement for it. What are the facts?

Grass on Salt Marsh in Humboldt County.

EDITORS PRESS:—I send you a specimen of grass which is found near the borders of the bay and on the salt marsh. I would like the correct name.—G. B. KNEELAND, Arcata, Humboldt Co., Cal.

EDITORS PRESS:—The specimen which you send me for a name is a kind of bent grass (*Agrostis*) which does not correspond exactly with any described species I can find; but most nearly with *A. spicaventi* of Europe, which is not considered of any agricultural value. Let it be tried.—E. W. HILGARD, University of California.

Ramie Plant Wanted for Experimental Purposes.

EDITORS PRESS:—At the suggestion of Prof. Jas. A. Whitney, we take the liberty of asking you to send us, or put us in the way of getting three or four pounds of the ramie plant for experimental purposes. We believe we have a process by which the material can be reduced economically, and therefore hope you will be kind enough to comply with our request at your earliest convenience. Please send by express or mail. We will pay all charges.—WHITE & FRAZER, 170 Center St., New York City.

We do not know just where this can be obtained, but as we have heard of recent growth of the plant in different parts of the State, we print the above so that any reader who has the material can write directly to our correspondents concerning supplying their wants.

Grapevines near Salt Water.

EDITORS PRESS:—I will say to "Correspondent" that good qualities of the leading varieties of grapes are grown in, and about Soquel, within a mile of the bay, and where we have fogs from the salt water, nights and mornings, quite frequently, in fact, pretty regularly at this season of the year; so if your climate and soil are similar to ours, you need not fear the result. Grapes are not grown here extensively, for it was thought, for many years, that grapes would not grow here.—M. P. OWEN, Soquel, Santa Cruz.

LECTURE ON VINICULTURE.—We are informed that an invitation, signed by a large number of the leading vine growers of Sonoma, Sonoma county, has been sent to Professor Hilgard, asking him to deliver a lecture on viniculture at that place at some early and convenient date. Professor Hilgard has consented to deliver the lecture, and will probably be accompanied by Dr. Bleasdale, who will also speak upon the subject of wine-making. The meeting will be held in Sonoma village, and the day will probably be Friday or Saturday, October 18th or 19th. Exact announcement will be made hereafter, so that all in the neighborhood may attend. We are glad that such an exercise is planned, because it indicates an awakening of interest on the scientific side of wine-making, which certainly should be popularly expounded, so that all practical viniculturists may know and profit by a knowledge of the scientific principles involved in their industry. The whole course of the grape juice, from its elaboration upon the vine to the perfect wine in cask or bottle, is pregnant with chemistry. The subtle changes which are continually taking place have been detected by analysis; in fact, the whole industry of the vine has been made the subject of most thorough and careful scientific study. We should like to have the results of these studies set forth in every wine-making locality in the State, and we hope the Sonoma meeting will be a propitious inauguration of a thorough course of lectures upon the subject, either at the University or at different points throughout the State. Prof. Hilgard is excellent authority upon the chemistry of wine-making, and Dr. Bleasdale will prove an able coadjutor, for he comes recommended as a wine expert of the highest order. Let the Sonoma meeting be well announced throughout the county, and well attended.

THE CONSTITUTIONAL CONVENTION.—The week has been chiefly occupied in electing new members to fill vacancies and in making other arrangements for future work. There were three vacancies to fill—one in San Francisco, one in Alameda, and one in Mariposa. The following new members were chosen: S. B. Thompson, of San Francisco; J. West Martin, of Alameda, and J. M. Strong, for Merced and Mariposa. There was no little contest for these places, and, so far as we have heard, the new delegates are worthy of the high trust imparted to them.

Driving Nails or Spikes Under Water.

William Stack, of Oakland, has recently patented through the MINING AND SCIENTIFIC PRESS Patent Agency, an apparatus for driving nails or spikes under water, an engraving of which is shown on this page. It is well-known that it is extremely difficult to drive nails or spikes under water, even if it is only submerged a few inches. In constructing piers, wharves, or sea-walls, and in work of like character, it frequently happens that a considerable portion of the work is delayed, which can only be accomplished at low stages of the tide. If nails or spikes even be driven under water some of this delay can frequently be avoided. Again, it sometimes become necessary to remove articles which are submerged and which cannot be taken hold of, but which, if proper supports, or handles could be nailed on, could be grappled or raised. These difficulties are obviated by Mr. Stack's device, which has been put in practical operation in the construction of wharves and slips in the Oakland side of the bay.

Fig. 1 shows the application of the device, and Fig. 2 shows the construction. A is a metal tube of suitable length, the foot of which may be serrated as shown, so that the points will engage with the wood when the tube is pushed or driven against it. The rod or driver, C, has a recess or cavity, D, at the lower end so as to rest on top of the nail or spike shown in Fig. 2. Where the tube, A, is pushed against the timber

FIG. 2.



Putting the Deed for the Will.

It will be worth the while of our New York exporters to read the excellent article on the Pacific Coast Dairy from the RURAL PRESS, which appears on another page of this issue. We have suggested to the readers of the *American Dairyman* the expediency of establishing a trade with Brazil, for the purpose of making a fresh outlet for our dairy produce. It seems that the dairymen of the Pacific coast are interesting themselves in similar speculations. It looks as though they are likely to establish a large export trade with South America.—*American Dairyman*, New York City.

THE PACIFIC RURAL PRESS of San Francisco, in a well-written article on the Dairy Exports from the Pacific Coast, thinks that there will soon be a large foreign demand for California cheese, the manufacture of which is an important industry and increasing in that State, and also for butter packed in an imperishable form.—*Germantown Telegraph*, Philadelphia.

Our excellent contemporaries evidently share in that generous opinion of California's vigor of execution which regards a good thing thought of as already done. We wish the fact would tread on the heels of the thought in this matter as our friends intimated it has. We would not however, have them credit us with too great accomplishment in this matter. It is plain, as we have shown, that we must have an outlet before our dairy production can be profitably increased. It is also plain that in order to get this outlet we must work for it. It can also be demonstrated that we have non-producing countries easily accessible, which we should endeavor to

FIG. 1.



DEVICE FOR DRIVING NAILS UNDER WATER.

in the desired position, the spike or nail is dropped in at the upper end and slides down against the timber. The rod, C, is then slid down on top of the nail and by alternately drawing out and forcing the rod into the tube, the rod serves as a driver; or by hammering on the upper end of the rod the nail is driven into the wood. The tube answers both as a guide for the nail and driving rod. The tube can also answer as a guide for a screw-driving device on the end of the rod, by which lag screws may be put in place under water as well as nails. Of course the tube may be set in any position desired, so that nails may be driven at an angle if necessary. The appliance will be found very useful in many cases for bridge building or similar purposes. The inventor may be addressed N. E. corner Fifth and Harrison streets, Oakland, Alameda county.

SUGAR CANE HARVESTER.—Mr. John Howell, of Woodland, Yolo County, has devised a machine which is intended for harvesting sugar cane. The cane has heretofore always been cut by hand, and this machine is intended to serve the same purpose for cane that a reaper does for grain. It is to cut it off close to the ground, and as the stalks fall back into the machine they are carried through a stripper and the leaves stripped off, all at one operation. The machine is propelled over the ground by horses, like an ordinary header. Mr. Howell is desirous of finding some one to interest themselves with him, and assist in defraying the expenses of obtaining patents on the invention.

Selling or Holding Wheat.

Several readers have called upon us during the week to ask our opinion concerning the future of the wheat market. We do not claim any particular foresight in this matter. We do, however, make a constant study of the market and the influences affecting it, and such general conclusions as we arrive at are offered for what they may be worth.

In the first place the price is now low. In only one instance during the last 15 years has it been lower in October. This fact has this significance: that prices always tend toward an average, and, though there may be exceptions, the general tendency of a very low market is upward. There are certain conditions under which this general principle must be applied to the present case. First, let us compile some statistics and then remark upon their significance. The following table gives the highest price for wheat in this market in October, December and February in each of the years named:

	October.	December.	February.
1864-5.....	\$4.37½	\$3.75	\$5.30
1865-6.....	2.00	2.10	2.25
1866-7.....	1.95	2.00	1.75
1867-8.....	2.64	2.64	2.91
1868-9.....	2.05	1.94	2.05
1869-0.....	1.67½	1.64	1.75
1870-1.....	2.05½	2.30	2.52
1871-2.....	2.85	2.83	2.25
1872-3.....	1.70	2.05	2.00
1873-4.....	2.37½	2.35	2.25
1874-5.....	1.57½	1.60	1.55
1875-6.....	2.10	2.00	1.95
1876-7.....	1.80	2.25	2.12½
1877-8.....	2.45	2.50	2.10
Gen'l av'gs.....	\$2.25½	\$2.23½	\$2.34

These are the facts concerning the course of prices in former years, during the months corresponding to the period upon which we are now entering. The average price during 14 years, at this time of the year, has been \$2.25; now it is \$1.65, and but once before has it been lower.

It is seen by the table that there is, on the average, an advance in prices from October to February, but the advance is slight and would hardly balance the cost of holding. The deduction would be that when wheat is at its average price there would be little or no object in holding it for the six months following October 1st. But this year it is much below its average, and it lies wholly with the ability of the market to approach its average to determine whether there is anything to be gained in holding or not. This ability must be discerned, if at all, by reference to the particular facts and conditions which may influence the demand for wheat during the next six months.

In the first place the present low price is owing to the reports of enormous crops in this country and to the large amounts of wheat which are known to be bearing upon the English market. The East has already made very large shipments, and had it not been for the well continued demand for France, the market would probably have broken worse than it has already. Our own wheat has been put afloat rapidly. More cargoes have been cleared since July 1st, than during the whole year previous to that date. The English home crops have been better this year than for three years preceding. These facts have made British purchasers cautious, and with such a large amount of wheat *en route* and in their store houses, little can be expected of them in the way of price. Not until the stock is reduced can their appetite be expected to improve.

The hope for better prices for the present crop lies chiefly in the demand for the continent of Europe. Each week we have given accounts of the continued shipments to France. There is also considerable Russian wheat being stopped at the French ports. It is impossible yet to tell how much will be needed to supply the lack of France and other short countries, but it seems likely that having secured large amounts early, there will be a disposition to purchase more slowly hereafter, until the proportions of the needs to be supplied show themselves. It would be our judgment from all the facts which we possess, that there is but small reason to hope for much improvement in prices for the next few months. Those who have their minds fixed on gaining a higher price, must, in our opinion, prepare to hold at least until after the beginning of the new year in January, for not until that time will the general features of the supply and demand disclose themselves.

THREE million five hundred thousand young salmon were sent East, September 30th, for distribution by the Government.

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- A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.
- W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.
- PAGE BROTHERS, 323 Front street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.
- R. G. SNEATH, San Bruno, Cal., breeder of Jersey cattle. Has Jersey bulls for sale—various ages—at \$40 to \$100.

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- L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.
- M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.
- GEORGE McCracken, San Jose, Cal. Pure blooded Cotswold Sheep for sale.

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- WILLIAM NILES, Los Angeles, Cal. Importers and Breeders of Thoroughbred Poultry. Eggs for hatching.
- MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

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- A. J. TWOGOOD, Riverside, Cal., Importer and Breeder of Pure Bred Poland-China Hogs.
- W. & J. ROBINSON, Hanford, Tulare Co., Cal., Importers and Breeders of Thoroughbred Berkshire Swine and Pure Brown Leghorn Fowls. Trios a specialty.
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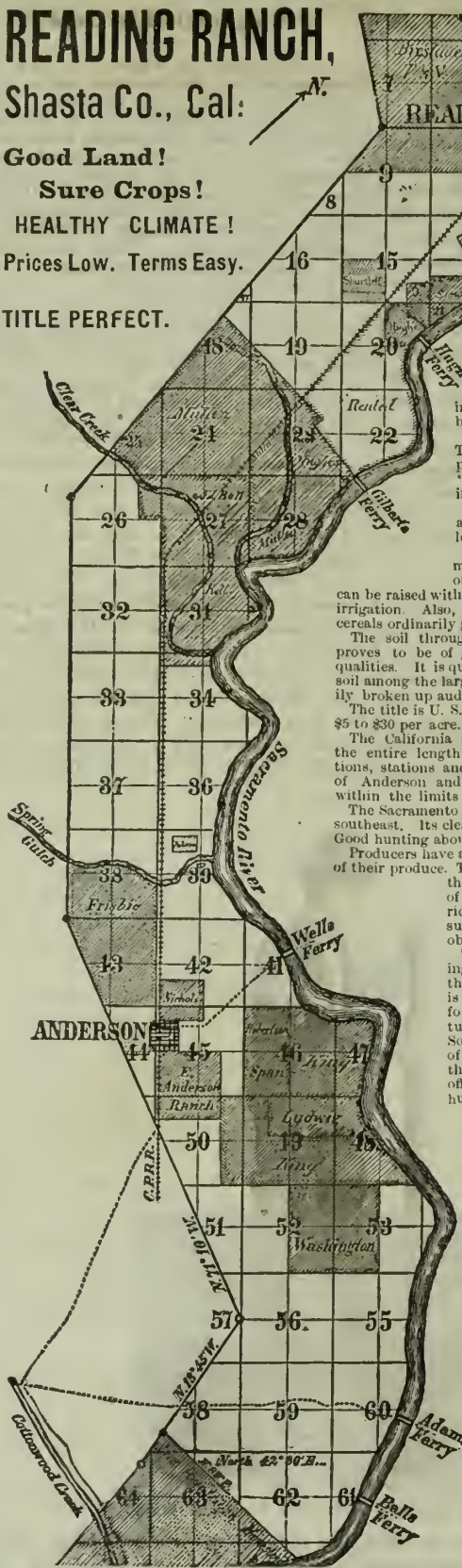
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The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer land owners in California. It is situated on the west side of the Sacramento River and extends over 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drought.

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Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract without irrigation. Also, Alfalfa, Vegetables, Corn and all other cereals ordinarily grown in the State.

The soil throughout the titled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

The title is U. S. patent. Prices range principally from \$5 to \$30 per acre.

The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southeast. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

Town lots are offered for sale in Reading, situated on the Sacramento river, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

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P. S.—Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

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Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 169 miles; from Marysville, 117 miles.

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It does its work better and quicker than any other machine. Boys and girls can use it with great facility; many considering TWENTY BUSHELS a fair day's work, while some have pared and sliced THIRTY BUSHELS in twelve hours.

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This is no stock company. The deeds to lands will come direct from Pinkerton and Jackson, to whom all moneys will directly pass, and each purchaser is only liable for the lands contracted for. There is no joint responsibility.

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A fruit and grain ranch, containing about 100 acres, situated at the old mining town of Knight's Ferry, Stanislaus county, California. The place is extensively planted with fruit trees, vines and berries, all of the choicest varieties, of vigorous growth and bearing abundantly, every thing of this kind being raised here with the least possible care and in the greatest perfection. The facilities for irrigation, when required, are first-class, the ditch of the San Joaquin Water Company traversing the grounds. There are on the premises a commodious dwelling-house; a stone store-house of large dimensions, with cellar underneath; a spring-house, containing distillery apparatus and conveniences for making wine; also, stables and all other needed out-houses. This land is well inclosed and every way highly improved. The products of these orchards and vineyards have for twenty years commanded the highest prices in the San Francisco market, the adjacent mining camps having also taken a portion of them at good prices. There are on the land rich gold placers that could be worked with large profit, as sufficient water for the purpose can be had at low rates. The farm-house is but 8 miles from the railroad station and within an easy day's drive of many prosperous mining camps. Work horses, wagons, harness, cows, hay, farming utensils, a quantity of wine and vinegar, and much other valuable personal property goes with the place. As this fine estate must be sold, it is offered, animals, etc., included, at the low price of \$4,000, fifteen hundred of which may, if desired, remain secured on the land at the rate of 10 per cent. annual interest. Title perfect. For further particulars inquire of Claus Gercken on the premises, or of Dr. Henry De Groot, office Mining and Scientific Press, 414 Clay street, San Francisco.

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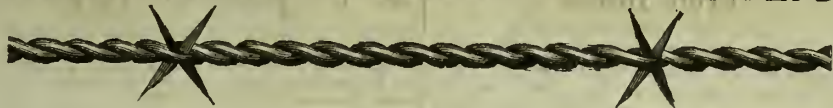
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On Bear River, Humboldt County, Cal., containing 600 acres of so good grazing land as any in the State. New Dairy and Dwelling House. The land is well watered, and plenty of timber for firewood and shelter, and well fenced. I will also sell with the ranch 100 head of choice dairy cows and five horses. Price, \$13,000, one-half down, the remainder on easy terms for one, two or three years. Apply either in person or by letter to RICHARD JOHNSTON, Post-office address, Myrtle Grove, Humboldt County, Cal., or to R. J. JOHNSTON, No. 1,324 Howard Street, San Francisco.

TO OUR PATRONS AND THE PUBLIC.



Having obtained the control of the SCUTT PATENT MACHINERY on the Pacific Coast, we beg leave inform you that we are manufacturing the

Scutt Patent Four-Pointed Steel Barbed Fence Wire,

And we claim its superiority for the following reasons, viz: It is plaited, thereby preserving the grain of the metal. Our machines do not twist the single strand. We use steel made by the Seaman & Martin process for barbs. Our wire is made entirely by machinery, and is perfectly uniform. It is plaited by patent process, and is weather-proof. There are no knife points. It is four-pointed, having 128 points to the rod, double the number of any two-pointed wire. Our wire is wound upon strong spools, and can be shipped any distance.

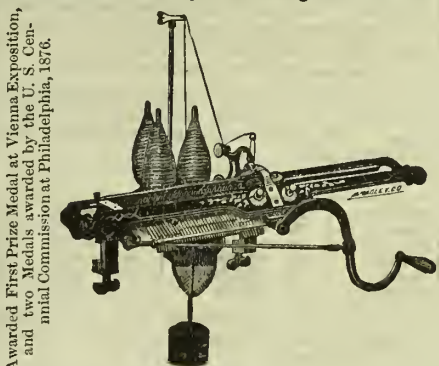
To those needing fencing, and being obliged to transport it long distances by rail and wagon road, we would especially call attention to the difference in cost between barbed wire and lumber, as well as in cost of material. It takes 300 pounds single strand for one mile, and less than one-half as many posts as board fences. Please address orders to

GRANGERS' UNION, Manufacturers,
280 and 282 Main Street, STOCKTON, Cal

BEE RANCH FOR SALE.

One of the best ranges in the State. At present working 375 stands Italian Bees. Apply for particulars to
D. W. McLEOD,
Riverside

THE IMPROVED. Lamb's Family Knitting Machine.



IT IS THE ONLY MACHINE
That knits flat or tubular work of all sizes;
Narrows and widens on bosomy or tubular work;
Knits a regular right-angled heel, as by hand
Narrows off the toe;
Knits a sock or stocking complete;
Knits mittens or gloves of any size without seam;
Forms genuine Ribbed or Seamed work;
Knits the Double, Flat, or Fancy web;
Knits an elastic seamed-stitch Suspender with button-holes;
Knits the Afghan stitch, Cardigan Jacket stitch, Fancy Ribbed stitch, the Raised Plaid stitch, the Nubia stitch, Shell stitch, Unique stitch, Tidy stitch, etc.
It is now the standard machine for manufacturing, and the only family knitter that fills the bill. Local agents wanted. Send for circulars to

J. J. PFISTER & CO., General Agents,
Manufacturers of knitted goods and dealer in woolen yarns.
120 SUTTER STREET, Room 46, San Francisco.

Grangers' Bank of California, 42 California Street, SAN FRANCISCO CAL.

Authorized Capital - \$2,500,000,
In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,
ALBERT MONTEPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

A Country Store Wanted.

GLEASONVILLE, TEHAMA CO., CAL.,

May be found a good place to open a country store. We have just finished a splendid new building. It is now ready for goods, and we will rent it on reasonable terms. This place is in the midst of a rich farming country, where crops have never been known to fail. The nearest stores are from 15 to 18 miles distant.

The town of Gleasonville has a good hotel, blacksmith and shoe shop and saloon, but no store. The storekeeper could use from \$8,000 to \$10,000 to advantage, but can do a good business with less. A good man with money to command is wanted to open the store.

Address, **GLEASON & MASON,**
Gleasonville, Tehama County, Cal.

BERMUDA GRASS

Roots and Cuttings For Sale,

Ready for Delivery after the First Rains.

R. J. TRUMBULL & CO.,

419 and 421 Sansome St., San Francisco.

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Incorporated February 10th, 1875.
Capital Stock, - - \$1,000,000.

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Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.
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FALL STYLE HATS NOW OUT!

At No. 336 Kearny St., bet. Bush & Pine,

— AND —
910 Market St., above Stockton,
SAN FRANCISCO.

Send for our Illustrated Catalogue.

A Good Business For Sale.

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FOUNDRY,

Suitable for all kinds of Agricultural Manufacturing or House Building. Address,

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Animals, Landscapes and Patent
Model Photographing a Specialty.

Special Photographer for the Pacific Rural
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WATER WHEEL.**
WARRANTED BEST & CHEAPEST.
Also, MILLING MACHINERY.
PRICES REDUCED APR. 20, '78.
Pamphlets free. OFFICE, YORK, PA.

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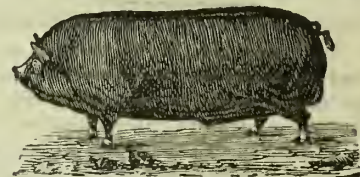
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Breeder and Importer of the "Crown Prince," "Sambo," and "Bob Lee" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.
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BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,
18th and A streets, Sacramento City, Cal.

SPRING VALE FARM, Three Miles N. W. of San Bernardino, Cal.



Thoroughbred Berkshire and Poland China Swine. Light Brahma and Black Cochins Chickens for sale.
T. C. STARR.

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THOROUGHbred POULTRY.

116 Acres Unlimited Range.

DEVOTED TO Healthy Stock.

FANCY Largest Yards on the Coast.
POULTRY.

Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.

Safe arrival of Fowls and Eggs Guaranteed.

Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents.

Send stamp for price list. Address

M. EYRE, Napa, Cal

EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

Chance in the Nursery Business.

There is a good chance in Tehama County for a skilled man who will go to work and start a nursery. The location is one mile from Vina station, in Tehama County, in a good growing region of country; the land is first-class and water abundant. A man is wanted, with good references, who will start a first-class nursery in partnership with the owner of the land. Address,

S. C. DICUS,
Vina Station, Tehama County, Cal

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce.

REFERENCE.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

THE PACIFIC LAND AND TRUST CO.

Rent Houses, Collect Rents, and Manage Estates.

HOUSES AND LOTS FOR SALE in this City, Oakland and Alameda. Lands and ranches for sale in all parts of the country. Agents in the principal cities. Collections made throughout the Coast.

No. 534 California Street.

GRAPE DRIERS, ATTENTION!

Parties who cannot perfectly cure their Grapes by the sun can make liberal arrangements to either sell them or have them cured on my Driers, by applying to

GEO. A. DEITZ,
No. 81 J Street, Sacramento, California.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING SEPTEMBER 24TH, 1878.

STEAM OR HYDRAULIC STEERING APPARATUS—John Gates, Portland, Ogn.
OIL CUPS—Alden D. Kilborn, Oakland, Cal.
OIL STOVES—Henry L. Howse, S. F.
CONVERTING MOTION—William Meyers, Oakland, Cal.
COOLING FAUCETS FOR BEER BARRELS—Charles C. Redmond, San Jose, Cal.
DREF WATER SAFETY BATHS—Joseph J. Bamber, S. F.
TRADEMARKS—William G. Badger, S. F., overalls, jumpers and ready-made goods for outside wear.

THE OSTRICH INDUSTRY.—Any of our readers who may have thought of starting ostrich ranches are warned that it appears that considerable capital would be required to get the stock. We read that at a public sale of ostriches at Middleburg (in South Africa), twenty pairs of breeding ostriches realized an average of nearly \$1,000 per pair. The lowest price given for a single couple was \$650, and as much as \$1,425 was paid for one pair of birds. It is said that a few years ago ostriches could be procured in South Africa for the catching, and were purchased for a mere trifle for exhibition purposes in England, whereas at the present time a live ostrich does not exist in London. The importance of the birds on the ostrich farms of Cape Colony may thus readily be realized. Even the eggs of the birds, once commonly collected as curiosities, are now hardly obtainable, being reserved for breeding purposes. And while such keen competition exists for the birds themselves, their produce is also eagerly sought for. At a recent sale of ostrich feathers at Port Elizabeth, a parcel of selected "blooms" realized the fancy price of \$288 per pound, or about \$3 for each separate feather.

PRESERVING BUTTER.—A simple and very effective method is adopted by dairymen on Fall river, Shasta county, to keep their butter over the hot weather and low price season, by simply sealing up their product in tin cans and sinking them in the bottom of a cold stream. Butter made in April comes out in October in good order, and continues to keep fresh in the cool weather of winter. Forty-pound cows are commonly used.

STOCK FOR OREGON.—Col. Peter Saxe and son started the other day for Oregon, by steamer, taking 66 head of blood stock bought, at this year's California fairs, for exhibit at the Oregon State fair, and for sale to the northern farmers. Col. Saxe expects to be absent in Oregon five or six weeks.

CURE FOR HEN LICE.—Mrs. McMahon, of Dixon, recommends as the best thing to relieve hens from lice, sweet oil (8 ounces) mixed with a teaspoonful of oil of sassafras. Pour some in a dish and apply with an old tooth brush or other convenient article, under the wings, etc.

EVERY new subscriber who does not receive the paper and every old subscriber not credited on the label within two weeks after paying for this paper, should write personally to the publishers without delay, to secure proper credit. This is necessary to protect us and subscribers against the acts and mistakes of others.

POPULAR MUSIC.—Make your homes merry and popular with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. The RURAL PRESS can offer to introduce you there.

Woodward's Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a boa-constrictor have just been added. New guests are constantly engaged for the Pavilion exercises. Rates of admission as usual.

FOR PRINTING MATERIALS, the publishers of this paper patronize Marder, Luse & Co., Pacific Type Foundry and Printers' Supply Warehouse, 582 Clay street, San Francisco, Cal. Send them a stamp for specimen sheet, and say advertised in this paper.

A COMMENDABLE ENTERPRISE in San Jose.—Bro. Her-ring, late of the *Agriculturist*, has charge of the Union Free Reading Room, San Jose. He is endeavoring to establish the institution upon an enduring basis for the benefit of all.

Fruit Driers.

EDITORS PRESS:—Two of the largest fruit driers that I have yet seen are in successful operation in Sacramento at No. 81 J street, and were put up by Mr. George A. Deitz, the inventor. The capacity of these driers are very large, holding over 200 trays, each capable of curing four tons per day. His driers at Brighton, Florin and other vineyards, are to be rebuilt to hold 1,500 trays each, and will hold 20,000 pounds of fruit. These large driers are intended more for curing grapes than other fruits. I examined some of the fruit made in these driers, and it was superior in quality to the imported, and at a rate to sell just as cheap as the imported. I have just seen a letter from Gen. Le Duc, Commissioner of Agriculture at Washington, written to Mr. Deitz, saying there are a great many inquiries in regard to the raisins he sent to the Paris Exposition, and that a price should be made at what they can be sent for to Paris. Other inquiries from different European sources he is in communication with in reference to his raisins. This is showing where eventually the world is looking too to get an excellent quality of raisins, and it will not be long before a good market will open throughout Europe as the foreign raisins now are transmitted to the United States.

The large capacity of the Deitz driers enables our raisin-makers to handle immense quantities of grapes in a short time. I understand from Mr. Deitz he is going to cure 1,000 tons this fall, and from the appearance of the thousand of grape trays piled away one in the other, and still making, he will be good as his word, and looks like business. At the various points where his driers are, the grapes will be picked direct from the vine on the trays and conveyed to the driers; in that way less handling and more perfect will the fruit be in good shape. He expects to retain the bloom with all the finest qualities that the grape possesses, that it may be par excellence to enter any market. He has made an arrangement with Ed. Bosqui & Co., of your city, to bring out in the best artistic style tens of thousands of chromos for future use, and is receiving an immense amount of paper made by the Mount Holly Paper Co., of Pennsylvania, expressly for his use, of the finest quality, superior to the paper that comes in the imported raisin boxes. Also, 40,000 boxes from Cook & Sons Pioneer box factory of this city. This can give you but an inkling what one is doing at one point, when others in the same line will operate throughout the State, showing California can produce and can show the finest varieties of raisin grapes in the world, and any quantity of them. And it has been shown by the Deitz process that a raisin can be made so cheap that we have the world for a market, as it has been seen no expense will be spared to put our raisins in the market in the finest style of package, equal to the best imported Dehesa, that is selling at 25 to 30 cents a pound in New York, wholesale, and of a finer quality.

Here is a grand field of profit for our grape culturist, and Mr. Deitz, Blowers and others are leading the way to bring our cured fruits in the market of a quality and price, and that we can compete with the best cured fruit of Europe. Mr. Deitz is not only going largely in the raisin line, but he is paying particular attention to curing the fig, plum, prunes, and prunellas. These fruits are packed in the most attractive style. These prunes and prunellas are pronounced by the Hon. J. Routier, a French gentleman of large experience, equal to the imported ones, and is one of our oldest, largest and best fruit-raisers in the country, he having one of Mr. Deitz's driers on his place at Routier station, S. V. R. R. Mr. Routier states that he can make as fine a prune as ever imported in the United States. He is planting and grafting on an extensive scale the Petite and the large French prune to cure by the Deitz process, and says he can make more money curing prunes and prunellas than on any fruit he has got. He has one of the largest and best orchards in the country, and has been in the business since '50. Other vineyards might be mentioned that fruit may be dried from, as Dr. W. S. Manlove, J. T. Day, Wm. Baker and others lying along in the same range. At Florin is James Rutter, Wm. Robinson, Carrington Bros., Cyrus Towle and Wm. Gerber. At Elk Grove, Harvey and Joseph Kerr, Wm. Treat and others.

I am pleased to see energetic as well as substantial men devoting their time, money and experience in developing one of our best agricultural interests, and resources of the soil, i. e., fruit interest. Entering the vineyard, gathering the thick clustered vines, transferring them to the drier, bringing them out in a perfect cured state, putting them up in the finest artistic style and disbursing them throughout the world for a market, and if this Deitz drier proves to be cheap and a sure means of curing our surplus fruits, fruit-raising will be one of the most profitable as well as pleasing pursuits that one can pursue, as well as one of the necessities to build up a large importing trade on our coast for our magnificent grapes that so quickly grow and mature from the rich soil of our State. A word here might not be out of the way to refer to the distinguished artist, Miss Hannah Millard, who has taken so much pains to visit the principal vineyards of our State and gathered varieties of the most general culture, and with exquisite skill has made each kind a water-color drawing, precisely true to nature; then given to the great chromo and lithographic draughtman, Mr. Wm. Harring, which is in the hands of Messrs. E. Bosqui & Co., printers, lithographers and publishers, for sale.

The grape season is just opening for the year. The fruit is fast ripening and entering market; preparations are being made, and shipping commenced to all parts of the State and East; our fruit growers busy preparing and selecting the choice golden clusters for market sales; our box factories receiving orders and quickly dispatching them by rail and steamer; our fruit drying companies busy arranging for an early opening in the season; our wine and brandy manufacturers putting everything in shape, while eyes from the East and Europe eager gathering all the important items in relation to the fruit interest that our State develops, as it is leading in the forward ranks in a commercial way before the world. At the late State Fair a fine display of dried fruit was made of last year's drying by Mr. Geo. A. Deitz as well as others throughout the State.

Sacramento, Cal.

—Geo. Rich.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, October 9th, 1878.

But little has been done this week. The continued stagnation in the English market and the large amounts which shippers already have on the water, leads them to adopt conservative views for the present. The newest thing in the Wheat trade is the system of grading which the Produce Exchange has adopted, and of which the *Call* says: "At a meeting of the Produce Exchange Tuesday, the report of the Committee on Grain Standard was received and adopted. The system heretofore in practice, of classing our Wheat good Shipping, choice Milling, choice Shipping, and poor Shipping, is considered vague and unsatisfactory. The new grades established are No. 1, to embrace all choice Wheat; No. 2, to embrace Wheat which has heretofore been classed as fair average Shipping; and No. 3, to embrace a low standard or poor Shipping. The report states that the standards fairly represent the incoming crop, which is not of as high a quality as in former seasons."

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday....	9s	9d@10s	—	10s	—	@10s	4d	
Friday.....	9s	9d@10s	—	10s	—	@10s	4d	
Saturday....	9s	9d@10s	—	10s	—	@10s	4d	
Monday.....	9s	9d@10s	—	10s	—	@10s	3d	
Tuesday....	9s	9d@10s	—	10s	—	@10s	3d	
Wednesday..	9s	9d@10s	—	10s	—	@10s	3d	

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1876.....	10s	1d@10s	4d	10s	5d@10s	8d		
1877.....	12s	5d@12s	9d	12s	9d@12s	—		
1878.....	9s	9d@10s	—	10s	—	@10s	3d	

The Foreign Review.

LONDON, October 8.—The *Mark Lane Express*, in its review of the British Corn trade for the past week, says: Although the opinion obtains that the lowest prices have been reached, it has been expressed with much diffidence, as the milling demand has shown very few signs of increasing, and unless it does, sales can only be forced at lower rates, seeing that speculative buyers hold altogether aloof. Should the winter prove severe, increased consumption may fairly raise prices a few shillings per quarter, but, if, as is not unfrequently the case, the reverse is experienced, it is difficult to say what is to prevent the threatened glut of Corn. Meanwhile, the trade remains in a languid state, and sales made have been quite of a retail character. Maize gave way six pence per quarter at the beginning of the week, but with diminished shipments, from America and an advance quoted in Liverpool, the decline has been to some extent recovered. With large arrivals at ports of call during the past week, the floating cargo trade for Wheat ruled steady, without quotable change, and the demand for the Continent still continues.

Freights and Charters.

The *Call* says: We have seldom, if ever, had so demoralized a freight market during a good crop year as there is at the present. Not only is the unengaged fleet large, but there is nothing doing in the Grain market, very little Wheat coming in, and the ships loading are getting along very slowly. It is impossible to give quotations. There have been charters at 30s for Liverpool, but there is no great number of owners that are willing to take less than 40s and many consider that rate too low. Last engagements for Liverpool or Havre were at 35s. Tonnage in port unengaged 70,876 tons; engaged for Wheat, 43,027; for merchandise, 12,263 tons.

Eastern Grain Markets.

NEW YORK, October 5.—Shipments of grain to Great Britain continue comparatively light, but the French demand holds on remarkably. Very few Frenchmen are engaged in the business, which is mostly carried on by two large Israelite merchants. Spring Wheat has been almost neglected, but in Winter there have been heavy transactions, with a decline in all kinds of 2@3c, bringing Winter down to 90c@91 10, and Spring to 88c@91 18.

CHICAGO, October 5.—The Wheat market the week has been moderately active, with prices closing to-day at the lowest point during the week. Cash Wheat sold to-day at 82½@82¾c. The continued liberal receipts and a lack of shipping demand for the speculating grade make it very difficult to realize, and the difference in Cash and November to-day widened to 1½@2c. The accumulation of Wheat during the past week has also aided in establishing the decline. Receipts during the past week, 981,000 bushels, against 1,303,000 for the corresponding week last year. Shipments for the week, 495,000 bushels, against 1,300,000 for the corresponding week last year. Corn has been dull during the week, and prices in favor of buyers, closing to-day at 34½c for cash, and 35½c, seller October. Receipts have been heavy and holders had to reduce their views in order to make sales for

future delivery. The market is quiet. Seller December is quoted at 34½@35c, and May at 36c.

Eastern Wool Markets.

NEW YORK, October 5th.—The Wool market has been fairly active this week, assisted in a great measure by the tone at the close, and showed a slight improvement. It was a noticeable feature that when a fraction above rates recently current was asked, buyers ceased to exhibit an interest. Manufacturers acknowledge that prevailing rates were low—so far, in fact, that a loss is netted on about every pound sold where the holder purchased in the country; but still they show little or no anxiety regarding the future—the case being exceptional where a parcel of any magnitude is taken for use, unless it be of medium grade. Choice X and XX Ohio are offered at 35@36c and XXX at 38c. These are the top market rates. California and Texas are taken fairly, but the prices obtained are seldom sufficient to cover first cost. The following cable was received from London yesterday: "Australian auction closed firmly. Average Port Phillip, 1s; Bradford, demoralized. Carpet stock, unsalable. The sales for the week include 65,000 lbs spring California, at 19@26c; 20,000 lbs fall do, at 52c; 10,000 lbs Colorado, 16c; 25,000 lbs Oregon, 23@27½c; 18,000 lbs spring Texas, 23c; 40,000 lbs X and XX Ohio, 35@36c; 20,000 lbs light medium do, 36½c; 15,000 lbs unmerchantable do, 26½c; 16,000 lbs unwashed do, bucks, etc., 18@24½c; 10,000 lbs Ohio combing, 43c; 133,000 lbs medium unwashed Western, 28½c; 35,000 lbs fine do, 24c; 2,000 lbs X do, 34c; 45,000 lbs medium washed do, 36c; 1,500 lbs Burry do, 22c; 5,000 lbs unmerchantable do, 25c; 15,000 lbs Ohio and Pennsylvania combing and delaine, 40@43c; 5,000 lbs unwashed combing, 28c; 3,000 lbs tub washed, 36c; 50 bags super pulled, 29@34c.

PHILADELPHIA, October 8.—Wool quiet, firm; 18@25 for California fine and medium, and 18@20 for coarse.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Sept. 18.	WEEK. Sept. 25.	WEEK. Oct. 2.	WEEK. Oct. 9.
Flour, quartersacks..	75,841	40,235	49,795	30,250
Wheat, centals.....	533,024	350,223	297,013	388,200
Barley, centals.....	71,424	77,051	61,500	87,207
Beans, sacks.....	2,100	6,259	8,029	4,450
Corn, centals.....	2,410	3,338	1,019	1,013
Oats, centals.....	7,415	19,461	16,271	26,203
Potatoes, sacks.....	11,845	20,214	17,831	19,399
Onions, sacks.....	890	571	1,621	1,197
Wool, bales.....	4,654	4,373	5,305	5,241
Hops, bales.....	618	902	854	993
Fay, bales.....	1,787	1,705	2,087	2,340

BAGS—The ring still holds its price. A small lot of grades were put up at auction the other day but were bought in by the ring.

BARLEY—Feed Barley is arriving in large quantities and rates are shaded off a little. Brewing is in good request and considerable exports are being made each week. We note sales: 150 sks dark coast Feed at 85c, 100 and 175 do at 87½c, 300 fair coast at 92½c, 200 and 230 good do at 95c, 450 light Brewing at \$1.17½, and 700 do at \$1.20 per ctl.

BEANS AND PEAS—The large arrivals of new Beans, still cuts prices and present rates will be found in our list below. Field Peas have also declined a little, the rate being now \$1@ \$1.50.

CORN—Corn holds its price generally and large yellow has sold a trifle better. We note sales: 329 sks small yellow sold at \$1.16½ and 68 do at \$1.15 per ctl. Sales of large yellow at \$1.13½ per ctl.

DAIRY PRODUCE—Choice fresh roll is in small supply and good demand. An advance of 2½@6c per lb is noted. All pickled and packed stock is dull and slow, owing to the excessive amounts in hand.

EGGS—An advance of 2½c per dozen is noted. **FEED**—The best Wheat Hay has advanced 50c per ton; now reaching as high as \$15. Sales are quite satisfactory in amount and prices firm.

FRESH MEAT—All kinds of Fresh Meats are reported by dealers abundant and low. Hogs have declined owing to large arrivals.

FRUIT—Our list shows a general advance in fresh Fruits. Cranberries from Wisconsin are now in, and selling at \$13@14 per bbl.

HOPS—The local Hop market is almost wholly without trade. A few goods sold a month ago are now being delivered, and this is all the movement discernable. The Washington Territory crop is now coming in. Emmet Wells reports the New York market for the week ending Sept. 27th as follows: "We stated in last week's Circular that the yield of the New Crop, in our opinion, would be 60 per cent. lower than last year's; we intended to say 40 per cent. instead of 60. Considerable many Hops have changed hands this week at prices as quoted below. The arrivals continue small as compared with last year, which is pretty good evidence that growers are not satisfied with the present ruling figures, and are holding back their Hops under the hope of better prices later on. Values here are now well established, and more business on export account will be done as soon as the quality of the arrivals improves."

OATS—Large lots are coming in from Washington Territory, and prices take a lower range. We note sales: 150 good California feed \$1 25, 40 common \$1 15, 110 choice Humboldt \$1 37½, 40 good do \$1 35 per ctl.

ONIONS—The price has kept along evenly at last week's figures. **POTATOES**—Nearly all kinds have dropped

point or two, as the receipts have been in excess of present requirements.

PROVISIONS—The demand for Meat products is active and prices unchanged. Eastern Hams of reliable brands are scarce and high. Local packers are operating freely in Beef and Pork, although hogs on foot at present quotations are said to barely compete with Eastern product.

VEGETABLES—Changes are few and unimportant. Correct prices may be found in our list.

WHEAT—The rates quotable are exactly the same as a week ago. Transactions are comparatively light and few. We note the following: 700 cts fair Shipping, \$1 60; 100 choice Milling, \$1 65; 400 very poor at \$1 37; 12,000 cts good Shipping at \$1 62½; 1 65; 500 fair Shipping, alongside, at \$1 65; 900, 425 and 1,200 do., at \$1 62½; 250 very poor, at \$1 25; 2,200 cts good Shipping, sold at \$1 67½, alongside.

WOOL—The local trade is almost lifeless. One house reports sales of 25,000 lbs at 11½ cts; then transactions are usually five times as great. Prices are nominal for the present.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., October 9, 1878.

BEANS & PEAS.	Almonds, hd shd lb	7 @ 8
Bayo, cts.....	Soft shl.....	14 @ 16
Butter.....	Brazil.....	14 @ 16
Pea.....	Pecans.....	13 @ 14
Red.....	Peanuts.....	5 @ 6
Pink.....	Pilberts.....	15 @ 16
Small White.....		
Lima.....	Alviso.....	62½ @ 75
Field Peas.....	Union City, cts.....	62½ @ 75
BROOM CORN.	San Leandro.....	62½ @ 75
Old.....	Stockton.....	62½ @ 75
New.....	Sacramento River.....	62½ @ 75
CHICORY.	POTATOES.	
California.....	Petaluma, cts.....	87½ @ 12½
German.....	Humboldt.....	75 @ 12½
DAILY PRODUCE, ETC.	Cutter Cove.....	15 @ 12
BUTTER.	Early Rose.....	62½ @ 100
Cal. Fresh Roll, lb	Half Moon Bay.....	100 @ 25
Fancy Brands.....	Kidney.....	100 @ 25
Pickle Roll, new.....	Sweet.....	100 @ 25
Pickin, new.....	POULTRY & GAME.	
Western.....	Hens, doz.....	7 00 @ 7 50
New York.....	Roosters.....	5 00 @ 6 50
CHEESE.	Ducks, tame.....	3 50 @ 4 50
Cheddar, Cal., lb.....	do, Mallard.....	4 00 @ 4 50
Eastern.....	Geese, pair.....	2 00 @ 2 50
N. Y. State.....	Wild Gray, doz.....	— @ —
Gilroy Factory.....	White do.....	— @ —
EGGS.	Turkeys.....	20 @ 23
Cal. fresh, doz.....	do, Dressed.....	— @ —
Ducks.....	Snipe Eng.....	3 00 @ 3 50
Oregon.....	do, Common.....	50 @ 75
Eastern.....	Quail, doz.....	1 00 @ 1 25
do by express.....	Rabbits.....	1 50 @ 2 00
Pickled hore.....	Hare.....	3 00 @ 3 50
FEED.	Venison, lb.....	7 @ 8
Bran, ton.....	PROVISIONS.	
Corn Meal.....	Cal. Bacon, Hvy, lb	11½ @ 11
Hay.....	Medium.....	12 @ 12½
Middings.....	Light.....	12½ @ 13
Oil Cake Meal.....	Lard.....	11 @ 12½
Straw, bale.....	Cal. Smoked Beef.....	9½ @ 10
FLOUR.	Shoulders, Cover'd.....	7 @ 8
Extra, bbl.....	Hams, Cal.....	12½ @ 13
Superfine.....	Dupe's.....	17 @ 17½
Graham, lb.....	None Such.....	— @ —
FRESH MEAT.	Ames.....	— @ —
Beef, 1st quality, lb	Whittaker.....	— @ —
Second.....	Magnolia.....	17 @ 18
Third.....	Reliable.....	17 @ 18
Mutton.....	SEEDS.	
Spring Lamb.....	Alfalfa.....	5 @ 12
Pork, undressed.....	Canary.....	4 @ 4½
Dressed.....	Chloro, Red.....	15 @ 16
Veal.....	White.....	50 @ 55
Milk Calves.....	Cotton.....	6 @ 10
do choice.....	Flaxseed.....	3 @ 3½
GRAIN, ETC.	Hemp.....	6 @ 6
Barley, feed, cts.....	Italian Rye Grass.....	35 @ —
Brewing.....	Perennial.....	35 @ —
Chevalier.....	Millet.....	10 @ 12
Buckwheat.....	Mustard, White.....	2½ @ 3½
Corn, White.....	Brown.....	14 @ 2
Yellow.....	Rape.....	3 @ 5
Small Round.....	Ky Blue Grass.....	18 @ 20
Oats.....	2d quality.....	16 @ 18
Milling.....	Sweet V Grass.....	10 @ —
Rye.....	Orchard.....	25 @ 30
Wheat, Shipping.....	Red Top.....	15 @ 18
Milling.....	Hungarian.....	8 @ 10
Off Grades.....	Lawson.....	50 @ 10
HIDES.	Mesquit.....	— @ 25
Hides, dry.....	Timothy.....	9 @ —
Wet, salted.....	TALLOW.	
HONEY, ETC.	Crude, lb.....	7 @ 7½
Beeswax, lb.....	Refined.....	9 @ —
Honey in comb.....	WOOL, ETC.	
do No. 2.....	San Joaquin, free.....	10 @ 12½
Dark.....	South Coast, do.....	10 @ 12½
Strained.....	Sac and Northern.....	13 @ 15
HOPS.	Mendocino & Hum.....	16 @ 17
Oregon.....	Southern, bury.....	9 @ 11
California.....	Northern, do.....	11 @ 12
Wash. Ter.....	NUTS—Jobbing.	
Oil Hops.....	Walnuts, Cal.....	8 @ 9
NUTS—Jobbing.	do Chile.....	7 @ 8

LUMBER.

WEDNESDAY M., October 9, 1878.

CARGO PRICES		OFFUGET SOUND PINE	
REDWOOD.		RETAIL PRICE.	
Rough, M.	13 00	Rough, M.	18 00
Refuse.	9 00	Fencing.	18 00
Clear.	23 00	Refining and Step.	28 00
Clear Refuse.	13 00	Narrow.	30 00
Rustic.	23 50	2d quality.	25 00
Refuse.	18 00	Laths.	3 50
Surfaced.	20 00	Furring, lineal ft.	2 00
Refuse.	9 00	REDWOOD.	
Flooring.	20 00	Rough, M.	18 00
Refuse.	12 00	Refuse.	14 00
Beaded Flooring.	23 00	Pickets, Rough.	15 00
Refuse.	13 00	Pointed.	16 00
Half-inch Siding.	16 00	Fancy.	22 50
Refuse.	14 00	Siding.	20 50
Half-inch Surfaced.	20 00	Surfaced & Long Beaded.	30 00
Refuse.	14 00	Flooring.	30 00
Half-inch Battens.	16 00	Refuse.	22 50
Pickets, Rough.	12 50	Half-inch Surfaced.	30 00
Rough, Pointed.	12 50	Rustic, No. 1.	30 00
Fancy, Pointed.	18 00	Battens, lineal ft.	2 00
Shingles.	1 75	Shingles M.	2 00

RETAIL GROCERIES, ETC.

WEDNESDAY, M., October 9, 1878.

Butter, California	Rice.....	8 @ 12
Choice, lb.....	Yeast Pwdr, doz.....	1 50 @ 2 00
Cheese.....	Can'd Oysters doz.....	30 @ 50
Eastern.....	Syrup, S F Gold'n.....	75 @ 102
Lard, Cal.....	Dried Apples, lb.....	10 @ 14
Eastern.....	Ger. Prunes.....	12½ @ 10
Flour, ex. fam, bbls	Figs, Cal.....	9 @ 15
Corn Meal, lb.....	Peaches.....	11 @ 10
Sugar, wh. crshd	Oils, Kerosene.....	50 @ 60
Light Brown.....	Wines, Old Port.....	3 50 @ 50
Coffee, Green.....	French Claret.....	1 00 @ 2 50
Tea, Fine Black.....	Cal, doz bot.....	3 00 @ 4 50
Finest Japan.....	Whisky, O K, gal.....	50 @ 60
Candle, Adm'te.....	French Brandy.....	4 00 @ 6 00
Soap, Cal.....		

FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., October 9, 1878.

FRUIT MARKET.	White.....	6 @ 8
Apples, box.....	Peaches.....	7 @ 8½
do Cooking.....	do pared.....	18 @ —
Bananas, bunch.....	Pears.....	3 @ 12½
B'berries, drwr.....	Plums.....	3 @ —
Cocoanuts, 100.....	Pitted.....	15 @ —
Cranberries, bbl.....	Prunes.....	8 @ 10
Figs, lb.....	Raisins, Cal, bx	2 25 @ 2 50
Grapes, com, bx.....	do, Halves.....	— @ —
Grapes, chice, do	do, Quarters.....	— @ —
Limes, Mex.....	Blowers.....	2 75 @ —
do, Cal per M.....	Malaga.....	2 75 @ 3 00
Lemons, Cal M.....	Zante Currants.....	8 @ 10
Sicily, box.....	VEGETABLES.	
Oranges, Mex.....	Beets, cts.....	50 @ —
M.....	Beans, String.....	2½ @ 3
Tahiti.....	Cabbage, 100 lbs	40 @ 50
Cal.....	Canteloupes, case	2 00 @ 5 00
Peaches, bsk.....	Carrots, cts.....	40 @ 50
do mountain.....	Cauliflower, doz	50 @ —
Pears, box.....	Cucumbers, bx.....	25 @ 50
do, Bartlett.....	Egg Plants, box.....	75 @ —
do, Seckle.....	Garlic, New, lb.....	2 @ 2½
Pineapples, doz.....	Green Corn, doz.....	2 @ 7
Plums, lbs.....	Green Peas.....	2 @ 2½
Prunes, box.....	Lettuce, doz.....	10 @ —
Quinces, bsk.....	Parsnips, lb.....	2 @ —
Raspberries, lb.....	Horseradish.....	3 @ —
Strawberries, cts	Squash, Marrow	5 00 @ 8 00
fat, tn.....	Summer do, bx.....	75 @ 1 00
Apples, lb.....	Tomato, 50 lbs bx	15 @ 30
Apricots.....	Turnips, cts.....	50 @ —
Citron.....	White.....	50 @ —
Dates.....	Wat'm's, 100.....	3 00 @ 10 00
Figs, Black.....		

Signal Service Meteorological Report.

Week Ending October 8, 1878.

HIGHEST AND LOWEST BAROMETER.						
Oct 2	Oct 3	Oct 4	Oct 5	Oct 6	Oct 7	Oct 8
30.02	29.90	29.96	30.00	29.96	29.95	29.94
29.89	29.83	29.87	29.92	29.90	29.88	29.90
MAXIMUM AND MINIMUM THERMOMETER.						
72	76	64	68	77	65	61
56	57	55	53	57	53	53
MEAN DAILY HUMIDITY.						
67	56	82	78	63	83	84
PREVAILING WIND.						
SW	W	SW	W	SW	W	W
WIND—MILES TRAVELED.						
137	133	207	215	102	100	249
STATE OF WEATHER.						
Clear.	Clear.	Fair.	Fair.	Clear.	Fair.	Cloudy
RAINFALL IN TWENTY-FOUR HOURS.						
Total rain during the season, from July 1, 1878, .56 in.						

To Subscribers of the California Agriculturist.

In transferring the subscription list of the *Agriculturist* to the PACIFIC RURAL PRESS, we have placed the date at which we purchased the *Agriculturist* (August 28th, 1878), following the names of all subscriptions not paid in advance of that date for the *Agriculturist*. The amount owing to the *Agriculturist* on the 28th of August, 1878, still stands charged on the books of the *Agriculturist*, which we hold for settlement.

We therefore request all subscribers owing the *Agriculturist* at that date (including discontinued subscriptions and those who were still receiving the *Agriculturist*) to send us the amount due at that date with \$3.50 for one year's advance subscription to the RURAL PRESS to August 28th, 1879, if they are pleased to continue the RURAL.

If any subscriber to the RURAL PRESS and *Agriculturist* should by mistake be receiving two copies of our paper, they will please notify us without delay by letter or postal card. If the RURAL PRESS is being sent to any individual who does not wish it continued, they will please notify us by mail (remitting if aught be due) and we will not knowingly send it beyond the time desired.

CERTIFICATE OF PARTNERSHIP.

The undersigned, having formed a partnership to carry on the business of Patent Agents under the firm name and style of Dewey & Co., Patent Agents, this certifies that the principal place of business of said partnership is situated at 202 Sansome street, in the city of San Francisco, State of California; and that Alfred T. Dewey, residing in the city of Oakland, State of California, and Warren B. Ewer, residing in the city of San Francisco, State of California, and George H. Strong, residing in the city of Oakland, State of California, are all the members of said partnership.

ALFRED T. DEWEY,
W. B. EWER,
GEO. H. STRONG.

STATE OF CALIFORNIA, } ss.
CITY AND COUNTY OF SAN FRANCISCO, }
On this second day of October, one thousand eight hundred and seventy-eight, before me, Chas. E. Kelley, a Notary Public in and for the said city and county, personally appeared Alfred T. Dewey, W. B. Ewer, and George H. Strong, known to me to be the persons whose names are subscribed to the within instrument, and they acknowledged to me that they executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.
CHAS. E. KELLEY,
[Seal.] Notary Public.

Endorsed—Filed October 7th, 1878.
THOS. H. REYNOLDS, County Clerk.
By J. WEALES, Deputy Clerk.

CERTIFICATE OF PARTNERSHIP.

The undersigned, having formed a partnership to carry on the business of General Publishers under the firm name and style of Dewey & Co., Publishers, this certifies that the principal place of business of said partnership is situated at 202 Sansome street, in the city of San Francisco, State of California; and that Alfred T. Dewey, residing in the city of Oakland, State of California, and Warren B. Ewer, residing in the city of San Francisco, State of California, are all the members of said partnership.

ALFRED T. DEWEY,
W. B. EWER.

STATE OF CALIFORNIA, } ss.
CITY AND COUNTY OF SAN FRANCISCO, }
On this second day of October, in the year one thousand eight hundred and seventy-eight, before me, Chas. E. Kelley, a Notary Public in and for the said city and county, personally appeared Alfred T. Dewey and W. B. Ewer, known to me to be the persons whose names are subscribed to the within instrument, and they acknowledged to me that they executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.
CHAS. E. KELLEY,
[Seal.] Notary Public.

Endorsed—Filed October 7th, 1878.
THOS. H. REYNOLDS, County Clerk.
By J. WEALES, Deputy Clerk.

New Red Raspberry.

Henricetta, Berries 3½ inches around. Twenty other varieties for fall planting. Blackberries, Currants, Grapes, etc. Circulars free. G. H. & J. H. HALE, South Glastonbury, Conn.

MUSICAL BOXES

—FOR—

Holiday, Birthday and Wedding Presents.

M. J. PAILLARD & CO.,

Manufacturers and Importers,

No. 120 Sutter St., San Francisco.

MUSICAL BOXES REPAIRED.

GRAND HEADQUARTERS.

DRAKE'S BAY COLONY,

Shafter's Rancho, Marin County, California.

13,600 ACRES,

Between North Pacific Coast Railroad and Pacific Ocean, three hours travel by steamer and railroad from San Francisco.

Schooners make the trip to Drake's Bay in six hours, and to Tomales Bay in nine hours. Produce can be shipped to market from the colony by schooner as well as by rail.

Title—United States patent.
Climate—Unsurpassed for mildness and equability.
Soil—Without exception the richest on the coast.
Water—Abundant. A failure of crop has never been known.
Wood—Sufficient for fire and fencing.

Agriculture—The soil, climate and situation render this property particularly adapted to those who wish desirable homes at a short distance from San Francisco. With the exception of tropical fruits, anything that grows in California can be produced upon this land.

This rancho, famous for its dairies, is now being subdivided into 20, 40 and 80-acre farms, under the auspices of the California Immigrant Union, and will be sold at low figures.

TERMS—One-fourth cash; balance in one, two and three years, with interest at eight per cent. per annum on deferred payments.

For full information, transportation, maps, etc., apply to

WM. H. MARTIN,

General Agent California Immigrant Union,

230 Montgomery Street, Room 23, S. F., Cal.

Parties desiring to visit the tract will be provided with tickets upon application as above.

FARM AT AUCTION

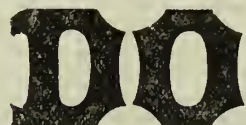
In Santa Clara County.

Will be sold on THURSDAY, October 24th, 1878, at 11 o'clock A. M., At the residence of the late W. S. HOLLENBECK, near MOUNTAIN VIEW.

320 acres of fine farming land—a part of the Hollenbeck farm. Also, at the same time and place, a large amount of stock and agricultural implements belonging to said farm, consisting in part of 8 Horses, 3 Colts, 6 Cows, 16 young Cattle, 50 Hogs, 3 Farm Wagons, 1 Spring Wagon, Plows, Harrows, Blacksmith, Carpenter and Farming Tools, etc. Sale positive to settle the Estate.

For further particulars, apply to or address

Geo. H. Briggs or Wm. Wright, Executors,
MOUNTAIN VIEW, Santa Clara County, Cal.
JAS. A. CLAYTON, Auctioneer.



DO NOT FAIL

to send for our Catalogue. It contains prices and description of most every article in general use, and is valuable to ANY PERSON contemplating the purchase of any article for Personal, Family or Agricultural use. We have done a large trade the past season in the remote parts of the Territories, and have, with few exceptions, exceeded the expectations of the purchaser, many claiming to have made a saving of 40 to 60 per cent. We mail these CATALOGUES TO ANY ADDRESS, FREE, UPON APPLICATION. We sell our goods to all mankind at wholesale prices in quantities to suit. Reference, First National Bank, Chicago.

MONTGOMERY WARD & CO.,
Original General Supply House,
227 & 229 Wabash Ave., Chicago, Ill.



CALIFORNIA WINDMILL.

(Patent)

Self-Regulator

This is the cheapest and best Windmill in the country. Has 78 fans, 10 feet in diameter. Price, \$75.

Every mill is warranted. Before you buy, send for a circular, giving full description to

BERRY & PLACE,
Market head of Front street, SAN FRANCISCO, Cal.

Vertical Feed Victorious.

THE NEW

"DAVIS VERTICAL FEED"

Lock-Stitch Sewing Machine.

Lightest running Shuttle Machine in the world.

SO CONFIDENT ARE WE THAT THE

VERTICAL FEED

(Which is as far in advance of the old feed used on all other machines as steam is ahead of horse-power, and is the exclusive property of this company), is the

ONLY POSITIVE SUCCESS

In all Departments of Sewing, that we make the following offer:

One Thousand Dollars

Will be given to any person (sewing machine experts included) who will, with any other sewing machine, follow the "DAVIS VERTICAL FEED" through its vast range of practical work.

All lovers of progressive science and mechanical perfection should see it, and every lady in the land should examine and try the "DAVIS VERTICAL FEED" before deciding to purchase an inferior machine, or a single-threaded plaything without a tension.

It is impossible to make a strong, elastic, or lock-stitch with any but a shuttle machine.

We are selling WHEELER & WILSON, GROVER & BAKER, SINGER and HOWE Machines for \$10 Each.

For descriptive circulars, price lists, samples of work and terms, apply at the office of the

PACIFIC COAST DEPARTMENT,

130 Post Street, San Francisco,

Agricultural Articles.

--THE--

California Horse-Power

For Irrigating Purposes.

The best in the World.

No machinery, and easily worked. One horse works two (2) eight-inch pumps, raising water 50 feet with 5-foot stroke, at the rate of 12,000 gallons per hour. For particulars send for circulars.

Manufactured at the SACRAMENTO FOUNDRY, corner Front and N streets, Sacramento, Cal., by

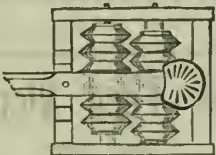
WM. GUTENBERG & CO.

FARMERS' FRIEND!

Patented

January 2d,

1878.



The Best

in the

State!

The Golden State Ground Roller

--AND--

CLOD CRUSHER!

State Rights For Sale. Manufactured at the

SACRAMENTO FOUNDRY,

Corner of Front and N Streets, Sacramento, Cal., by

WM. GUTENBERG & CO.

The Famous "Enterprise"

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Self Regulating

WINDMILLS,

Pumps & Fixtures.



These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babbitted boxes.

Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES, EVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

The Randall Puverizing Harrow.

A COMPLETE SUCCESS.



OVER 10,000 IN USE.

Local agents wanted. Descriptive circulars and Price list free on application.

Address,

CLAUDE V. BURKE,

Sole Agent.

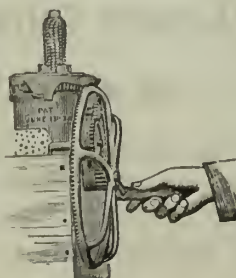
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Peerless Corn Sheller.

It is so cheap (costing only \$8), that almost any one can afford to buy one. It is so rapid, it will shell almost as fast as a \$10 machine, and seven or eight bushels per hour is not above its capacity. It weighs only 13 pounds and is simple and durable. For particulars, address

WEISTER & CO.

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MATTESON & WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over eradic knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON, STOCKTON, CAL.

RUPTURE.

Another Wonderful Cure Effected by CALIFORNIA ELASTIC TRUSS!



CALIFORNIA ELASTIC TRUSS COMPANY, W. J. Horne, Proprietor. --DEAR SIR:-- I feel that I owe it to you and to humanity to write the fact that I have been SUBSTANTIALLY CURED of a bad case of Rupture of 30 years' standing, by one of your incomparable Trusses, which I purchased from you three months ago. I cannot describe the suffering, both physically and mentally, that I have undergone during that period; and now I feel like a new being. I have worn all kinds of Trusses, both Steel and Elastic, and never received any permanent relief until I tried yours. Its simplicity of construction, and facility with which it can be adjusted, and the ease and perfect freedom to the motions of the body with which it can be worn without causing any irritation, are its chief merits, and it is a perfect support. I have not had any sign of a return of the Rupture since the first day I put it on, and feel that I am PERFECTLY CURED. It is invaluable, and the fact should be known to the world. You can refer anyone to me on the subject of their merits.

I am truly yours, ALFRED J. BURKE, Chief Mail Clerk S. F. Daily Evening Post. San Francisco, July 20th, 1878.

Endorsed by the Medical Profession.

SAN FRANCISCO, July 9th, 1878.

California Elastic Truss Co.: After practicing medicine many years in this city, during which time I have had an extensive experience in the application of all kinds of Trusses, I can and do recommend yours as the best in every respect, for it is as near perfection as modern science can make it. It has many advantages over the torturing steel hoop Trusses, which inflict great injury on the hips and spine, bringing on other distressing ailments, such as lumbago, neuralgia, affections of the kidneys and numbness in the lower limbs, all of which are avoided by wearing the California Elastic Truss. It is not only a perfect retainer, combining ease and comfort, but the pressure can be changed to any degree. It also remains in the proper place at all times, regardless of the motions of the body, and is worn night and day with perfect ease. It is superior to any of the Elastic Trusses now in the market, while it combines the merits of all. 1st--It is easily adjusted on and off with snaps, doing away with straps and buckles. 2d--The universal spring between the plate and pad prevents all irritation, which is a godsend to the sufferer. 3d--The pad is adjusted on and off in an instant, and can be changed for any other size and form most suitable to the case. In fact, it combines every quality essential to comfort and durability, and is unequalled in lightness, elasticity, natural action, and artistic finish. Many of my patients who are afflicted with hernia are wearing them, and all shall in the future, for I think the great ease by which these purely scientific appliances are made efficacious, is truly remarkable. You can refer any parties to me on the subject of their merits. I remain yours truly,

L. DEXTER LYFORD, M. D., Physician and Surgeon, 609 Sacramento street, San Francisco.

A Physician's 45 Years' Experience.

COLUMBIA, Tholomine Co., July 16th, 1878.

W. J. Horne, Esq. --DEAR SIR:-- For some time past I have used, in my practice, the California Elastic Truss, with entire satisfaction in most cases of complicated hernia of both sexes. During a practice of 45 years I have found no Truss that would, with the same ease and certainty, retain the required adjustment, the pressure being always under the immediate control of the patient. The simplicity and ease of application is of itself a guarantee to every experienced physician. I have the honor to remit by mail the amount due, knowing that I contribute to the alleviation of afflicted humanity.

Yours truly, J. P. TIBBITS, M. D. It is constructed on scientific principles and sells on its merits. If you want the best Truss ever manufactured, don't forget the name and number. Trusses forwarded to all parts of the United States at our expense, on receipt of price. Send for Illustrated Catalogue and Price List, giving full information and rules for measuring.

CALIFORNIA ELASTIC TRUSS CO., 615 Sacramento Street, San Francisco, Cal.

West Berkeley Lumber Yard, ALAMEDA COUNTY. (Successors to Z. B. Heywood & Co.)

Lumber, Shingles, Sash, Doors, Lime, Brick, and Builders' Hardware

Sold at the lowest San Francisco rates. Strict attention given Country Orders. Boats Loaded at the Wharf for all Points on the San Joaquin and Sacramento Rivers. Cars of the C. P. & R. Co. loaded at the yard. Orders received at 22 California Street, San Francisco, or at the hardware store of G. W. Babcock, No. 955 Broadway, Oakland.

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CO-OPERATIVE

Nursery & Fruit Company,

--OF--

LOS ANGELES COUNTY.

THOS. A. GAREY, Pres't & Business Manager.

Capital Stock, \$250,000--All Subscribed.

210 acres of land in Orchard and Nursery. 500,000 Orange and Lemon Trees now ready for market of the best and thoroughly tested varieties, including

GAREY'S MEDITERRANEAN SWEET ORANGE.

And

GAREY'S EUREKA LEMON.

These trees are thornless, the fruit almost seedless, early and regular bearers. These varieties have been endorsed by the Southern Horticultural Society.

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Sent post-paid on receipt of Five (5) Three (3) Cent stamps. No person should engage in Orange culture without first reading this Lecture, which treats on all the principal points.

Our trees are all budded on Orange roots.

PRICE CATALOGUE, containing full description of the above mentioned varieties, sent free. Address,

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Or F. B. FANNING, Secretary, Postoffice Box 188, Los Angeles, California.

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I offer for sale a large lot of strong, well-rooted plants of the

MONARCH OF THE WEST.

On my grounds the Monarch has done splendidly. The plants are strong, vigorous and healthy. The berries large, beautiful and well flavored. From two acres planted in January last, my sales netted over freight and commission, \$1,200 in less than six months.

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Or JOHN ROCK, Nurseryman, San Jose, California.

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NILES, ALAMEDA COUNTY, CAL.

We invite attention to our large stock of

Fruit Trees and Ornamentals,

Of the most approved varieties. Also, Coffee, Cork Oak, Olives, Guavas, English and Black Walnuts, Magnolias, Loquats, Entermits, Small Fruits, Evergreens, Etc. We have a choice stock of the Diospyros Kaki (Japanese Persimmon), of our own growing, and also, grafted stock imported direct from several Japan Nurseries. Address for catalogue and terms,

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A California Production. Retail price, 25 cts. and 50 cts. per package. AT Directions for use with each package.

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IMPORTED.

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Sweet Corn.

Early Canada } Early Dutton } Yellow Flint Corn.

Long Red Mangel Wurtzel } Yellow Globe } Beet Seed.

White Sugar

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

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Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

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Calvert's Carbolic SHEEP WASH, \$2 Per Gallon.

After dipping the sheep, is useful for preserving wet hides, destroying the vine pest, and for wet dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

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One Man Can Easily Lift
1,000 Pounds.

Load Always uspended; it
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Lowering Effected by Pulling
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One Man With This Tackle
is Better than Four or
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The general utility of this Pulley and the many
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it especially serviceable for agricultural purposes

It can be used successfully as a Stump Puller and Remover of Heavy Stones. To Farmers and Woodsmen this
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Surface and Deep-Well Pumps. Send for Circulars.

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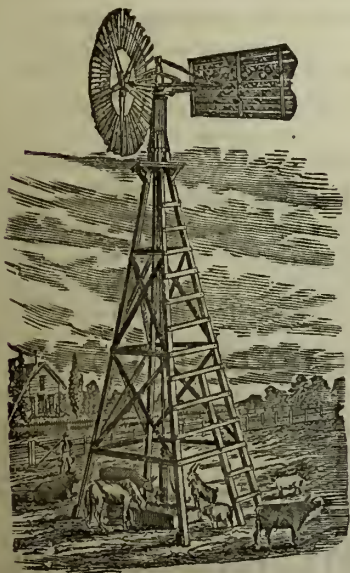
In consequence of spurious imitations of
LEA AND PERRINS' SAUCE,
which are calculated to deceive the Public, Lea and Perrins
have adopted A NEW LABEL, bearing their Signature,
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SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper.
Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London,
&c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.



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THE MOST POWERFUL AND THE NEAREST PERFECTION
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Tobacco**

Awarded highest prize at Centennial Exposition for
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ever made. An our blue strip trade-mark is closely
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One-third size by Dr. E. H. Pardee.



String measuring from center of tar-
get to center of each shot, 32
inches. Average distance of
each shot, 1 9-100 inches.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting,
Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles
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Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24
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26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—
extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S.,
known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines
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A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles
and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands
of Sporting Powder,

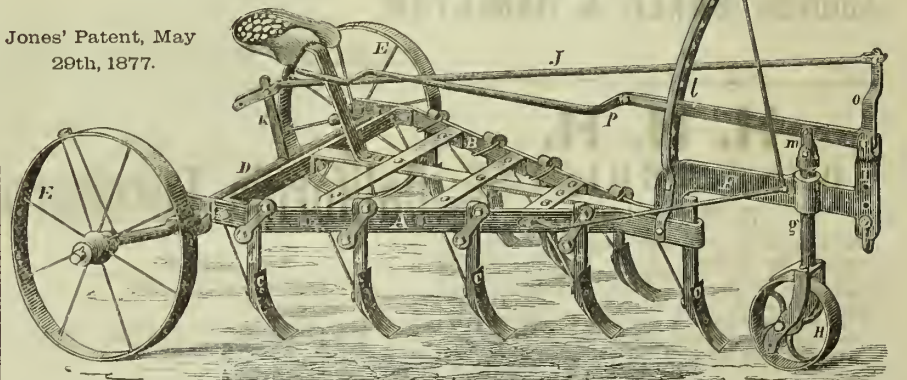
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HOLLY & MAGOON'S CULTIVATOR.

Manufactured by Holly & Magoon, Stony Point, Sonoma Co., and
Holly & Jones, Lakeville, Sonoma County.

Jones' Patent, May
29th, 1877.

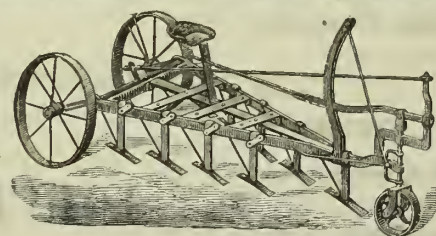


This Cultivator is made b
practical men, after years of
experience, and better meets
the wants of California far-
mers than anything before
offered.

Made of the best material
(with wood or iron frame),
and warranted in every re-
spect.

Prices
REASONABLE.

For further information address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Fran-
cisco and Sacramento, Cal.



Our new
DOUBLE-BOX WHEEL
Is a decided improvement, to
which we wish to call the
especial attention of those
who would secure the best
and most durable.

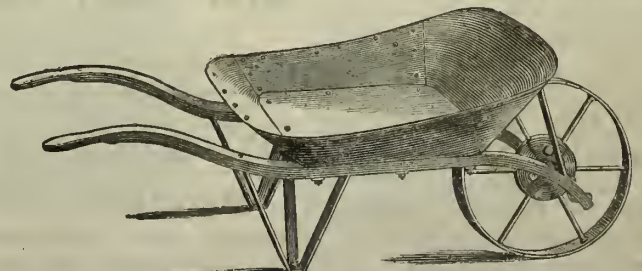
Our STRAIGHT CHISEL
CULTIVATORS (patent applied for)
are self-sharpening and made
of the best cast steel, with an
improved method of fasten-
ing to the standard, approach-
ing perfection itself.

FRANCIS SMITH & CO.,

MANUFACTURERS OF

THE PATENT CHANNEL IRON WHEELBARROWS,

SHEET
IRON PIPE.



SHEET
IRON PIPE.

The Strongest Barrow Made. These Barrows are made by Superior Workmen, and of the best material.
All sizes kept constantly on hand.

Lap-Welded Pipe, all Sizes, from Three to Six Inches. Artesian Well Pipe. Also, Gal-
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Iron Cut, Punched, and Formed for making pipe on ground, where required. All kinds of tools supplied for
making pipe. Estimates given when required. Are prepared for coating all size of pipes with a composition of
Coal Tar and Asphaltum.

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YOUR NAME PRINTED on Forty Mixed Cards for
Ten Cents. STEVENS BROS., Northford, Conn. 25 Styles of CARDS, 10c., 10 best CHROMOS, 10c., with
name, outfit 10c. J. B. HURSTED, Nassau, N. Y.

A GRAND SUCCESS!

Greatly Improved for 1878—New Malleable Iron Chains.

BAKER & HAMILTON'S GEM SEED SOWER.

Directions for Using the GEM Seed Sower.

Bolt the cast-iron rim wheel on the inside of the hind wheel of an ordinary-sized wagon; put the chain on the rim wheel and over the small chain pulley on the Sower, and then bolt the Machine to the bottom of the wagon, the disc facing outward; fill the Hopper with grain and all is ready.

You will notice there are Two Slides covering two openings; if you open the right hand one (facing the hind end of the wagon) the grain will be sown on the left side and behind the wagon, and vice versa. No grain need be wasted at any time by being thrown where not wanted. Grain should be clean, and free from straws, etc.

It is impossible to give directions as to how much the opening should be open to sow a certain quantity per acre. This depends on the weight and cleanliness of the seed and speed of the team. If the Machine is attached to a wheel smaller than 4 ft. 6 in. or 5 ft., and the team walks fast, it will sow too thin behind. We find many attach the Machine to Header Wagons. This is objectionable, as they pull hard over plowed ground, and to sow even, the horses are compelled to walk slower.

PRICE, \$35.

WE ARE SOLE AGENTS FOR THE

Gorham Broadcast Seeders and Cultivators,

Planet Garden Seed Sowers,

DO NOT FAIL TO SEE

The Superior [BUCKEYE] Improved Seed Drills,
BAIN WAGONS, EUREKA GANGS, ETC.

Address BAKER & HAMILTON,

San Francisco and Sacramento, Cal.

CAHOON SOWERS, \$17.50 CASH. \$20.00 ON TIME.

THE GEM IS THE CHEAPEST SOWER BECAUSE:

- It wastes no grain in beginning or finishing.
- It sows on either side of the wagon at pleasure.
- It sows bluestoned grain perfectly.
- It is made at San Leandro, and guaranteed.
- It is made of the best material.
- It is made in the best possible manner.

It Sows the Grain Evenly.

It will Pay to Buy It.

This Machine Can be Attached to Either a
Wagon or a Cart.

The GEM has entirely superseded the old style Cahoon's Sower, which throws the seed out perpendicularly, to be blown about by the wind, leaving a double quantity behind the wagon. The GEM throws the seed the same as if sown by hand. It sows on either side of the wagon at pleasure. It saves the price of itself over any other Sower in one season. In commencing to sow, one-half of the grain is not wasted, as you can close one slide and sow only on one side.



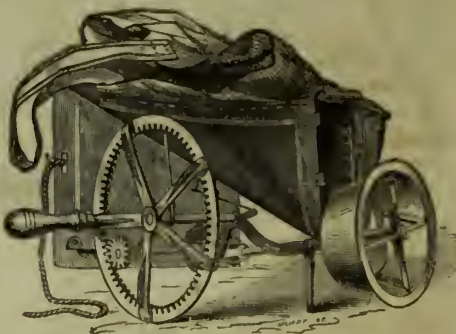
Price List of the Gem Sowers:

- No. 1, to run with chain... \$35
- No. 2, Belt... 40
- No. 3, All Gears... 50

CAHOON Sowers:

- No. 1, to run with chain... \$17.50 cash
- No. 2, to run with belt... \$27.50 cash
- No. 3, to run with all gears... \$35 cash

We manufacture these Seed Sowers at San Leandro.



CAHOON HAND SOWER, \$10.

H. H. H.

HORSE MEDICINE,
D. D. T.—1868.

As a horse medicine it is superior to any liniment ever invented. For RINGBONE, SPRAIN, SWELLEN, CALLOUS LUMPS, and all OLD SORES, apply freely so as to blister, from three to five days in succession, and in four or five days, if not cured, repeat as at first. SPRAINS, STIFF JOINTS, BRUISES, WINDGALLS, and all slight ailments, apply a small quantity so as not to blister. Saddle Sores, Cuts, and all other sores where the skin is broken, mix the liniment half and half with any kind of oil, and apply in moderation.

WILLIAMS & MOORE, Proprietors,
STOCKTON, CAL.

M. COOKE. R. J. COOKE.

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit & Packing Boxes Made to Order,
AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY

THE BOSS PRUNER.

Patented January 8th, 1873.

ENTIRELY NEW!

Works on a cog principle. Smallest size cuts one inch and largest size two inches in diameter. Has been thoroughly tested, and given perfect satisfaction. Sold by

GEORGE LARKIN,
Newcastle, Placer County, California.

DALTON & GRAY,
Commission Merchants,

WHOLESALE DEALERS IN

All Kinds of Country Produce.
404 & 406 Davis Street, San Francisco.

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MONEY ADVANCED ON
WHEAT

In Warehouse at the Lowest Rates.

McAFEE BROTHERS,

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50 Perfumed, Snowflake, Chromo, Motto, etc., CARDS,
with name, 15c. G. A. SPRING, E. Wallingford, Ct.

California Furniture Manufacturing Co.,

224 & 226 BUSH STREET, SAN FRANCISCO, CAL.

Manufacturers, Importers, Wholesale and Retail Dealers in

FURNITURE, Etc.

LATEST STYLES AND LOWEST PRICES.

WEST JERSEY NURSERIES!

WOODBURY, NEW JERSEY

GIBSON & BENNETT, PROPRIETORS.

100,000 Felton's Early Prolific and Reliance Raspberry.
200,000 Cinderella and Continental Strawberry Plants,
direct from the original stock.
Millions of other Plants, Trees, etc.
New descriptive Circular now ready.

MANSION HOUSE,

Corner of HUNTER STREET and WEBER AVENUE,
STOCKTON, CAL.

A Strictly first-class Lodging House. Rooms neat and
clean, by the day, week or month

MRS. M. A. HOLDEN, Proprietress

WANTED, by a middle-aged woman of education, a
position in a respectable farmer's family. Would make
herself useful. Salary small. References. Address,
INDUSTRY, office RURAL PRESS.

60 Chrono and Perfumed Cards (no 3 alike); name in
Gold and Jet, 10c. CLINTON BROS., Clintonville, Ct.

F. ALTMAN'S



Foundry and Machine Shop.

Manufacturer of all kinds of Steam and Agricultural
Machinery.

GANG PLOWS A SPECIALTY.

Shears and Mould Boards always on hand.

SAN JOSE, CAL.

ESTABLISHED 1868.

FURNITURE AND BEDDING,

The largest stock, best variety, and lowest prices of
substantial furniture on the Pacific Coast is at

W. D. COMSTOCK'S,

Fifth and K Streets, Sacramento, Cal.

To Fruit Growers and NURSEYMEN!

SEND TO—

Washburne & Reynolds, Ferndale, Hum-
boldt County, California,

For Roots of

THE SALMON BERRY.

Easily cultivated. Larger than the Blackberry, and
equal to the Strawberry in flavor. Ripens from March to
June, and grows in any soil. For particulars apply as
above.

CAPITAL WOOLEN MILLS,

248 J St., Sacramento,

CARRY A LARGE STOCK OF CASSIMERES, DOE-
SKINS, TWEEDS, FLANNELS, BLANKETS, READY
MADE CLOTHING AND FLANNEL WEAR
OF EVERY DESCRIPTION FOR THE
WHOLESALE TRADE.

Generous Discount on San Francisco Prices.

TAILORING.

In our Tailoring Department we
have an attractive assortment of
our own manufacture, together
with the finest display of French, Scotch, German and Eng-
lish goods to be seen in the City. We make suits to measure,
of every description, from the commonest working pants to
the finest cloth suit.

Country gentlemen, farmers and mechanics should take
notice that our facilities are really superior for furnishing
standard and durable goods at LOW CASH RATES.

COMMERCIAL HOTEL,

Nos. 273, 275, 277 and 279 Main Street, Smith's Brick
Building, STOCKTON, California.

FRED. C. HAHN, - - PROPRIETOR.

Rates, \$1.25 and \$2.00 per day. This popular Hotel has 61
well appointed rooms, has been refurbished and refitted in
the most elegant manner, and is the most comfortable and
convenient Hotel in the City. Large, pleasant rooms for
families. A Coach will be at all Trains to carry Passengers
Free to the Hotel.

BENNETT, PATTERSON & CO.,

Manufacturers and Dealers in

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Walnut, Marble Top and Cottage Sets a
Specialty.

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This paper is printed with Ink furnished by
Chas. Eneu Johnson & Co., 509 South 10th
St., Philadelphia & 50 Gold St., N. Y.



Volume XVI.]

SAN FRANCISCO, SATURDAY, OCTOBER 19, 1878.

Number 16.

Two New and Valuable Strawberries.

We take pleasure in presenting our readers with engravings of two excellent varieties of strawberries introduced on this coast by our contributor, Mr. Felix Gillet, of Nevada City, Cal., a practical, amateur horticulturist, who is constantly enriching his grounds with importations of promising growths from Europe and elsewhere. He is in correspondence with amateur and scientific horticulturists abroad, and gains many valuable things produced by them by skillful propagation and correct hybridizing processes. Our readers are already acquainted with Mr. Gillet through his practical and intelligent discussion of horticultural topics in our columns, and they will be glad to see a shadow of two fruits which he has found valuable.

The "Bonne Bouche" is a beautiful berry. Though having a French name, Bonne Bouche (which means, a "delicious morsel"), it was originated in the royal gardens of Frogmore, England. The berry is extraordinarily large, especially when the size is considered in connection with the enormous crop the plants bear. In fact, without forcing, and in taking care of the plants in the usual manner, the berries average from three to six inches in circumference, and in this proportion: 1 six-inch berry to 2 five inches, 6 four inches, 12 three inches. Hardly any berries smaller than three inches are seen on the vines, especially during their two first years of bearing. The plants are very vigorous and quite hardy; the leaves large, rather light green, stalks and runners very stout. It is characteristic of this variety, that almost every rooted runner bears a crop the ensuing spring, and all very large berries. As many as 18 distinct fruit stalks are seen on well cultivated plants, so that from 16 to 24 ounces of berries can be picked from a single vine.

The berry is almost round, regular, full, firm, juicy and sweet; seeds slightly imbedded; flavor rich, delicious; color light crimson, that is, darker than "Princess Dagmar," but not as bright as "Col. Cheney." Like the two latter varieties, Bonne Bouche is a regular bearer.

The engraving represents one each of berries whose circumference was six, four, and three inches, though the largest one is, by mistake, represented in the engraving smaller than it really is on the photograph, which is a correct copy of the original as sent to the RURAL PRESS a few months ago.

Our second engraving shows the "Carolina Superba." This French variety hails from the aristocratic abode of that haughty king, Louis XIV., it having been originated in Versailles, France. How it came to be named Carolina we do not know, but understand pretty well why it was called "Superba." Though not as stout and vigorous a grower as "Bonne Bouche," it is perfectly hardy, and many of the rooted runners bear on the ensuing season. The leaves are rather small, with stalks long and erect; runners slender. Mr. Gillet assures us that it is really wonderful to see the rows of large, long, scarlet berries lying on the ground all round the upright leaf-stalks, and it does not take long to pick a pound of berries from a single vine.

The berry is two inches long, conical in shape, regular and firm; flesh rosy, juicy; rich and highly flavored. The color, rather bright scarlet. It is in every respect an aristocratic variety. The berries are not extraordinarily large as "Bonne Bouche," but they average like

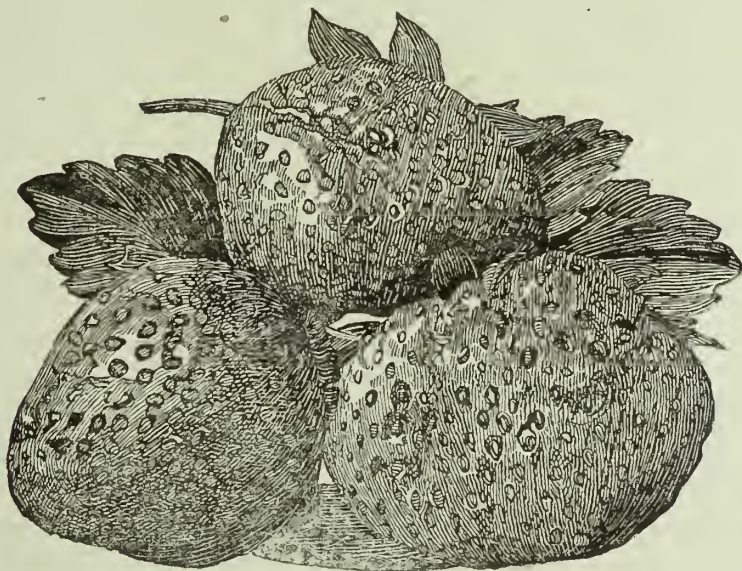
those represented in the engraving, two inches in length and one inch through.

The Agricultural Lectures.

The lectures on practical agriculture at the State University will begin on Tuesday, the 22d, at 11 o'clock, with an introductory discourse by Mr. Dwinelle. Those who wish to attend the course or the lectures on any special

monstration. Such a work properly comes within the province of our College of Agriculture, and would make its value clear to those most interested. We hope the suggestion may be found fit to be acted upon quickly, while the disease is uppermost in the minds of horse owners.

BEEKEEPERS' PICNIC.—Our correspondent at Scenega, Ventura county, informs us that the beekeepers of the State of California are in-

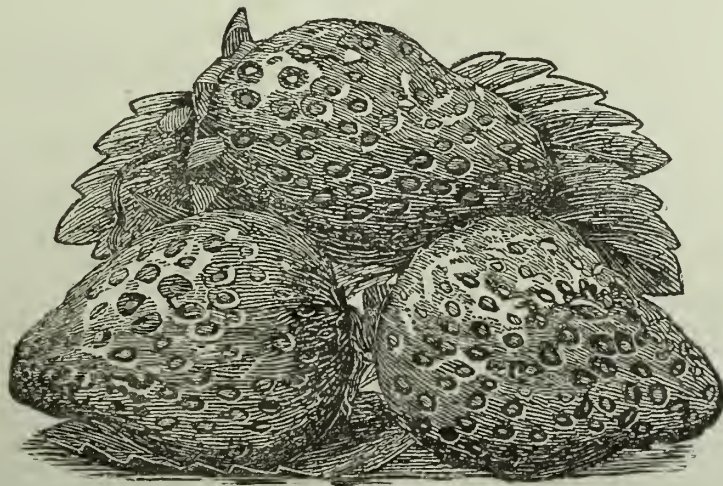


THE "BONNE BOUCHE" STRAWBERRY.

subject, and all others who are interested in the matter, are invited to be present. After consultation with those in attendance at that time, the days and hours for the regular lectures will be announced, with a view to making them suit the convenience of as many as possible. It is hoped that the numbers present will show that there is really a desire for instruction in the principles of agriculture.

It has been suggested that the Agricultural College might do the farmers good service if it

vited so take part in a beekeepers' picnic which will be held in Scenega, October 25th. All apiarists are cordially asked to attend, bring their provisions and blankets and stay two days or more on a good camping ground with plenty of shade and cool water. A good time is expected and some important subjects to beekeepers will be presented by able speakers. All will be invited to take part in discussions. We are asked to advise all coming to Scenega from the east to enquire at the postoffice, and from the west at



THE "CAROLINA SUPERBA" STRAWBERRY.

would secure a competent veterinary surgeon to give a lecture on the glanders in horses, illustrating the lecture with a horse killed by glanders, and making such dissections as are necessary to show the actual nature of the disease. The suggestion seems to us a good one. It would be in reality a clinic and would occupy two or three hours to treat the subject thoroughly. If it were held at some accessible point and due notice given, we doubt not a good number of farmers would avail themselves of the opportunity for practical information and de-

the Scenega stage station, to learn the location of the camp grounds.

SUCCOTASH.—It is reported that the Mexican Consul in this city has received advices of prosperous crops in the southern republic this season, and that our corn and beans will not be required as they were last spring. We would like to sell them as much every year as we have this.

CHICORY factories on the San Joaquin are in full blast.

The Dairymen's Meeting.

The attendance at the dairymen's meeting last week was thinner than one of the "lean kine" of old Pharaoh. There were not members enough present to form a corporal's guard on the morning after a disastrous retreat. The Secretary had received during the few preceding days, letters enough to have made a good sized meeting, but all, though expressing great interest in the work of the society, were for various reasons, unable to attend. Aside from the busy lives which most of our dairymen lead, there are several reasons why it is harder to secure a good representative meeting here than in the Eastern States. The dairy farms are widely scattered and long journeys are necessary to reach a center; rates of travel are high; many of our dairymen are unused to meetings for discussion of dairy topics, and do not understand their value, and hundreds who are interested in the discussion of these subjects, believe they can get just as much benefit by waiting a few weeks and reading the proceedings in the PRESS, as they could by hearing them in person. Some of these objections are valid and are real obstacles which the society will have to overcome in some way before it will ever secure a membership and attendance which will make its meetings of any great value. The belief that it is just as well to wait and read the proceedings as to take part in them, is incorrect, for the simple reason that the "proceedings" themselves are proportionate in size and value to the number of practical and inquiring men who contribute the fruits of their thought, their observation and experience. Thus this year, although we shall soon present interesting essays written for the meeting by Messrs. Nason of San Benito, Ashburner of San Mateo, and Berwick of Monterey, the matter outside of these will be small indeed; the sound of the grinding will be low because the grinders were few, and a dozen important subjects which need discussion and action, will still remain in the region of obscurity.

We own we do not know what can be done to draw the dairymen to conference concerning the matters affecting their complex industry. It has been suggested, and the proposition strikes us favorably, that some one of the leading fairs be induced to offer liberal premiums for the exhibition of dairy products, and that if it can be shown that samples from many dairies will be placed on view, the dairymen will be ready to assemble to examine the competing products and to take up discussions of dairy subjects. This is worthy of consideration. It would be important to have judging committees selected beforehand, and they must be men of acknowledged expertness in judging dairy goods. Experience hitherto in exhibiting dairy products in this State has not been generally reassuring, because awards have been made by committees who knew nothing of the qualities demanded by this market, and the cheese and butter which would sell comparatively low on Front street, have secured the highest awards. This is, however, merely a question of detail and could be guarded against by the announcing of a competent committee of judges.

We shall take up this subject at some convenient time in the future, and in the meantime we would be pleased to have suggestions from any dairyman concerning what it is advisable to do to excite an interest in the society, and to build up its membership and usefulness. We shall soon print the papers brought forward at last week's meeting

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Carson City, Nevada.—No. 2.

[From our Traveling Correspondent.]

The Virginia and Truckee Railroad

Is justly regarded as one of the grandest successes of modern engineering and railroad building. It was finished in the fall of 1872 from Reno to Virginia City, a distance of 52 miles, at a cost of \$100,000 per mile, or a total cost of \$5,200,000. The road passes through Truckee meadows, Washoe valley, Eagle valley, where Carson City is situated, down the Carson river a distance of six or seven miles, and then takes to the hills where it does some of the tallest mountain climbing until it lands at Virginia, the great city on the Comstock. Some idea of the amount of business done may be had by a knowledge of the fact that 30 trains pass over the road daily. Among the items of daily freight is about 600 cords of wood necessary for daily consumption in the mills and hoisting works of the Comstock. The company has at Carson a mammoth railroad building of stone and iron, used for a machine shop, roundhouse, foundry and car manufactory. The average number of employes of this road is 350. The company are now making arrangements to extend their road to Mason valley, Aurora and Bodie.

The Little Girl's Band.

One of the most novel and pleasing attractions of this exceedingly pleasant and attractive little city, is a band of musicians composed principally of little girls, or very young ladies, ranging from 10 to 16 years of age—citizens, and some of them natives of Carson. Mr. C. A. Marston, of this city, aided by Mrs. Marston, organized and instructed their youthful pupils in the science of music, arranged their pieces and taught them to play with such perfection that they now render some excellent classic music in a style that would do credit to older heads with more extensive training. It has generally been thought that it required an immense pair of lungs and great physical strength to blow a brass horn successfully, but that delusion is dispelled when you see a little girl blowing a horn that she could almost crawl into, with as much force or at least making as much noise as one of Gilbert's broad-chested Teutons. Their uniform is very pleasing. It consists of a gray sacque and kilt skirt of the same color, trimmed with maroon velvet ribbons or braid across the breast, a *tu militaire*, cuffs of the same with gold fringe, pockets of same, gold fringe, lower edge of sacque the same with gold fringe. The headdress is a helmet trimmed with gold ornaments and a white feather. The combination is very pleasing without being gaudy. The troupe consists of 11 pieces, under the leadership of Peter Spargo, and is composed of the following persons: C. A. Marston, Mrs. C. A. Marston, Peter Spargo, Mamie St. Clair, Laura Farrell, Ella Farrell, Lena Marston, Ida Marston, Annie Marks, Alice Farrell and Hattie Marks. Nevada Agricultural, Mining and Mechanical Society.

The object of this society, as we infer from their programme, is mainly for the exhibition and improvement of stock. The officers of the society are George Tuffy, President; George B. Hill, Vice-President; Israel Crawford, Secretary; and George Tuffy, Treasurer. They also have a Board of Trustees, composed of prominent residents of the State. The society have purchased and fitted up a fine race-track and fine exhibition grounds, distant from the center of business in Carson about three-fourths of a mile. Their first meeting is to be held October 1st to 5th, competition open to all the world, no entrance fee except in speed contests. There is already a fine showing of first-class stock upon the ground, and the meeting, from present indications, promises to be a success.

Cashmere Goats.

There is, perhaps, no place on the Pacific slope better adapted to the breeding and development of the Cashmere goat than in this valley and the foothills and mountain sides surrounding this basin. The climate is better adapted to that industry than California on account of the prevailing cool weather during a greater portion of the season. This theory is well demonstrated by the success of Sheriff Swift, of Carson City, in the breeding of that animal. Mr. Swift has the best band of imported goats in this State or California. His band consists of about 3,000. All his bucks and many of his ewes are imported, and all, with the exception of a few strays, will shear large fleeces, some as high as nine pounds, measuring—the longest staple—18 inches. Mr. Swift's farm is within one and one-half miles of Carson. His band is worth a visit from any lovers of stock of that description.

Imperial Pekin Ducks.

A flock of this choice duck can be seen at the residence of Mr. E. A. Moore, of this city. They are simply monstrous in size. I can convey no better idea of their size than by repeating the expression of a bucolic admirer: "Wy,

them is geese." They are perfectly white, with very large and very yellow beaks. A pair six weeks old weighed six pounds, and one six months old weighed seven and one-half pounds. Mr. Moore has also some fine specimens of white Leghorn and black Spanish chickens. Mr. Moore says fowls of all kinds do well here.

Cereals and Fruits.

Owing to the early and late frosts, the so-called black frosts, make it difficult to raise many kinds of fruit, such as peaches, apricots and nectarines; but apples, plums and pears, and many kinds of berries are produced to perfection, specimens of which I saw at the farm of Mr. S. C. Nevers, near this city, that will equal the best productions of the famous orchardists of Oregon. I also saw on the farm of Mr. J. E. Wood in the same neighborhood a specimen of yellow corn, called "Compton's field corn," which matured perfectly in four months from date of planting, thereby escaping the early frosts. The ears are very large and the grain perfect, well-filled and solid. The cereals, such as barley, oats and wheat, are easily produced, and potatoes, cabbage and turnips grow as well here as anywhere. The grazing wealth of this valley is well understood, and ranching or stock raising is one of the leading interests here.

By way of parenthesis, I wish to state that the first artesian well bored in this State was not at Battle Mountain, as stated in the *RURAL PRESS* some time since, but that honor belongs to Mr. J. T. Griffith, of this valley. He bored the first well in 1870, on the farm of Mr. S. C. Nevers. Said well was 18½ feet deep, and the stream shot out 7½ feet above the surface, and is flowing yet with unabated vigor, sending up a stream sufficient to supply all demands for household purposes and a surplus equal to the wants of a large number of acres for irrigating purposes. More anon. W. G. A.

HORTICULTURE.

When to Gather Pears.

EDITORS *PRESS*:—Some years ago I was buying pears for shipping, and preferring to gather them myself (or at least superintend it), I called on an old and intelligent orchardist to buy his pears. He told me he had but few that were in season for gathering just then which were very good; but he would have a good many very good ones a little later, and some also that were not very good; these he would sell with the lot at a low figure. I went through his orchard and found his pears to be of the best varieties in general cultivation, and asked him to set his price. "Well," said he, "if you take all the autumn pears in the orchard, you can have them at—cents per pound, except two varieties, and those you can have at your own price, for they are not worth much to me." "Well," I said, "show me your worthless pears, and we will soon trade." They were these: "Louise Bonne de Jersey" and the "Dix." These two varieties I considered about as good as any he had, and I thought I could guess the difficulty, so I told him I would take the pears, and I would gather the "L. B. De Jersey," then. "Oh!" said he, "if you pull the Jerseys now, they won't be worth anything—they are too green." I knew then that I had guessed the trouble. He had always left those varieties too long on the tree, so that when they ripened they were rather insipid and of poor quality; but I gathered the pears, and not being able to remove them all just then I left several boxes in his barn till I could get them away, and when I returned again he told me he had learned something about pears by selling his fruit to me. He said the "Bonne De Jersey" that I had left in the barn, was now a fine pear; and he was convinced now that he had always left them and the Dix pear too long on the trees to be good.

I relate this circumstance to show that we can learn a good deal about the cultivation and care of fruit by patient and careful investigation. I have said that this man was an "intelligent" man; and so he was, but he had not learned when to gather his pears, and there are many fruit growers in the same fix to-day. There is no pear so good, ripened on the tree, as in the fruit house, and some varieties are worthless when ripened on the tree that are most excellent when ripened in the box. This is also the case with several varieties of fall apples, but plums, peaches and grapes, don't improve any in flavor after gathering. The best peaches are right from the tree. M. P. OWEN.

Soquel, Cal.

NEW FORMS OF FUNGI.—The distinguished micologist, Dr. F. Von Thumen, reports that he has discovered two new forms of fungi which occasion considerable damage among garlic and onion crops. In certain parts of the Old Franconia district of Bavaria he has found the garlic completely destroyed by them, more especially when the weather is at all damp. The more destructive of these fungi is evidently a *Helminthosporium* and has been classed by Dr. Von Thumen as *Helminthosporium vest colosum*.

A SMALL THING IN ENGINES.—A Meriden watchmaker has made a steam engine weighing only fifteen grains. The works are of silver, and three drops of water are enough to keep them in motion twenty minutes.

ARBORICULTURE.

The Atlantic and Pacific Forests.—No. 7.

[By PROF. ASA GRAY.]

Now, a very considerable number of species of herbs and shrubs, and a few trees, of the temperate zone are found all round the northern hemisphere; many others are found part way round, some in Europe and Eastern Asia; some in Europe and our Atlantic States; many, as I have said, in the Atlantic States and Eastern Asia; fewer, which is curious, common to Pacific States and Eastern Asia, nearer though these countries be.

We may set it down as useless to try to account for this distribution by causes now in operation and opportunities now afforded, i. e., for distribution across oceans by winds and currents, and birds. These means play their part in dispersion from place to place, by step after step, but not from continent to continent, except for few things and in a subordinate way.

Fortunately we are not obliged to have recourse to overstrained suppositions of what might possibly have occurred now and then, in the lapse of time, by the chance conveyance of seeds across oceans, or even from one mountain to another. The plants of the top of the White mountains and of Labrador are mainly the same; but we need not suppose that it is so because birds have carried seeds from the one to the other.

I take it that the true explanation of the whole problem comes from a just general view, and not through piecemeal suppositions of chances. And I am clear that it is to be found by looking to the north, to the state of things at the arctic zone; first, as it now is, and then as it has been.

North of our forest regions comes the zone unwooded from cold, the zone of arctic vegetation. In this, as a rule, the species are the same round the world; as exceptions, some are restricted to a part of the circle.

The polar projection of the earth down to the northern tropic, as here exhibited, shows to the eye—as our maps do not—how all the lands come together into one region, and how natural it may be for the same species, under homogeneous conditions, to spread over it. When we know, moreover, that sea and land have varied greatly since these species existed, we may well believe that any ocean gaps, now in the way of equable distribution, may have been bridged over. There is now only one considerable gap.

What would happen if a cold period were to come on from the north, and were very slowly to carry the present arctic climate, or something like it, down far into the temperate zone? Why, just what has happened in the glacial period, when the refrigeration somehow pushed all these plants before it down to Southern Europe, to Middle Asia, to the middle and southern part of the United States; and, at length receding, left some parts of them stranded on the Pyrenees, the Alps, the Apennines, the Caucasus, on our White and Rocky mountains, or, wherever they could escape the increasing warmth as well as by ascending mountains as by receding northward at lower levels. Those that kept together at a low level, and made good their retreat, from the main body of present arctic vegetation. Those that took to the mountains had their line of retreat cut off, and hold their positions on the mountain tops under cover of the frigid climate due to elevation. The conditions of these on different continents or different mountains are similar, but not wholly alike. Some species proved better adapted to one, some to another, part of the world; where less adapted, or less adaptable, they have perished; where better adapted, they continue—with or without some change—and hence the diversification of alpine plants, as well as the general likeness through all the northern hemisphere.

All this exactly applies to the temperate zone vegetation, and to the trees that we are concerned with. The clew was seized when the fossil botany of the high arctic regions came to light; when it was demonstrated that in the times next preceding the glacial period—in the latest tertiary—from Spitzbergen and Iceland to Greenland and Kamtschatka, a climate like that we now enjoy prevailed, and forests like those of New England and Virginia, and of California, clothed the land. We infer the climate from the trees; and the trees give sure indications of the climate.

I had divined and published the explanation long before I knew of the fossil plants. These, since made known, render the inference sure, and give us a clear idea of just what the climate was. At the time we speak of, Greenland, Spitzbergen and our arctic seashore, had the climate of Pennsylvania and Virginia now. It would take too much time to enumerate the sorts of trees that have been identified by their leaves and fruits in the arctic later tertiary deposits.

I can only say, at large, that the same species have been found all round the world; that the richest and most extensive finds are in Greenland; that they comprise most of the sorts which I have spoken of, as American trees which once lived in Europe—magnolias, sassafras, hickories, gum trees, our identical Southern cypress (for all we can see of difference), and especially Sequoias, not only the two which obviously answer to the two big trees now peculiar to California, but several others;

that they equally comprise trees now peculiar to Japan and China, three kinds of ginkgo trees, for instance, one of them not evidently distinguishable from the Japan species which alone survives; that we have evidence, not merely of pines and maples, poplars, birches, lindens, and whatever else characterize the temperate zone forests of our era, but also of particular species of these, so like those of our own time and country, that we may fairly reckon them as the ancestors of several of ours. Long genealogies always deal more or less in conjecture; but we appear to be within the limits of scientific inference when we announce that our existing temperate trees came from the north, and within the bounds of high probability when we claim not a few of them as the originals of present species. Remains of the same plants have been found fossil in our temperate region, as well as in Europe.

Here, then, we have reached a fair answer to the question how the same or similar species of our trees came to be so dispersed over such widely separated continents. The lands all diverge from a polar center, and their proximate portions—however different from their present configuration and extent, and however changed at different times—were once the home of those trees, where they flourished in a temperate climate. The cold period which followed, and which doubtless came on by very slow degrees during ages of time, must have long before its culmination have brought down to our latitudes, with the similar climate, the forest they possess now; or rather the ancestors of it. During this long (and we may believe first) occupancy of Europe and the United States, were deposited in pools and shallow waters the cast leaves, fruits, and occasionally branches, which are imbedded in what are called miocene tertiary or later deposits, most abundant in Europe, from which the American character of the vegetation of the period is inferred. Geologists give the same name to these beds, in Greenland and Southern Europe, because they contain the remains of identical and very similar species of plants; and they used to regard them as of the same age on account of this identity. But in fact this identity is good evidence that they cannot be synchronous. The beds in the lower latitudes must be later, and were forming when Greenland probably had very nearly the climate which it has now.

Wherefore the high, and not the low, latitudes must be assumed as the birthplace of our present flora; and the present arctic vegetation is best regarded as a derivative of the temperate. This flora, which when circumpolar, was as nearly homogeneous round the high latitudes as the arctic vegetation is now, when slowly translated into lower latitudes, would preserve its homogeneity enough to account for the actual distribution of the same and similar species round the world, and for original endowment of Europe with what we now call American types. It would also vary or be selected from by the increasing differentiation of climate in the divergent continents, and on their different sides, in a way which might well account for the present diversification. From an early period, the system of the winds, the great ocean currents (however they may have oscillated north and south), and the general proportions and features of the continents in our latitude (at least of the American continent) were much the same as now, so that species of plants, ever so little adapted or pre-disposed to cold winters and hot summers, would abide and be developed on the eastern side of continents, therefore in the Atlantic United States and in Japan and Manchuria; those with preference for milder winters would incline to the western sides; those disposed to tolerate dryness would tend to interiors, or to regions lacking summer rain. So that, if the same thousand species were thrust promiscuously into these several districts, and carried slowly onward in the way supposed, they would inevitably be shifted in such a manner that the survival of the fittest for each district might explain the present diversity.

Besides, there are re-siftings to take into the account. The glacial period or refrigeration from the north, which at its inception forced the temperate flora into our latitude, at its culmination must have carried much or most of it quite beyond. To what extent displaced, and how far superseded by the vegetation which in our day borders the ice, or by ice itself, it is difficult to form more than general conjectures—so different and conflicting are the views of geologists upon the glacial period. But upon any, or almost any, of these views, it is safe to conclude that temperate vegetation, such as preceded the refrigeration and has now again succeeded it, was either thrust out of Northern Europe and the Northern Atlantic States, or was reduced to precarious existence and diminished forms. It also appears that, on our own continent at least, a milder climate than the present, and a considerable submergence of land, transiently supervened at the north, to which the vegetation must have sensibly responded by a northward movement, from which it afterward receded.

All these vicissitudes must have left their impress upon the actual vegetation, and particularly upon the trees. They furnish probable reason for the loss of American types sustained by Europe.

I conceive that three things have conspired

*This takes for granted, after Nordenskiöld, that there was no preceding glacial period, as neither paleontology nor the study of arctic sedimentary strata afford any evidence of it. Or if they were any, it was too remote in time to concern the present question.

to this loss. First, Europe, hardly extending south of latitude 40°, is all within the limits generally assigned to severe glacial action. Second, its mountains trend east and west, from the Pyrenees to the Carpathians and the Caucasus beyond, near its southern border; and they had glaciers of their own, which must have begun their operations, and poured down the northward flanks, while the plains were still covered with forest on the retreat from the great ice-wave coming from the north. Attacked both on front and rear, much of the forest must have perished then and there. Third, across the line of retreat of those which may have flanked the mountain ranges, or were stationed south of them, stretched the Mediterranean, an impassable barrier. Some hardy trees may have eked out their existence on the northern shore of the Mediterranean and the Atlantic coast. But we doubt not, taxodium and Sequoias, magnolias and Liquidambar, and even hickories and the like were among the missing. Escape by the east, and rehabilitation from that quarter until a very late period, was apparently prevented by the prolongation of the Mediterranean to the Caspian, and thence to the Siberian ocean. If we accept the supposition of Nordenskiöld, that anterior to the glacial period, Europe was "bounded on the south by an ocean extending from the Atlantic over the present deserts of Sahara and Central Asia to the Pacific," all chance of these American types having escaped from or re-entered Europe from the south and east, is excluded. Europe may thus be conceived to have been for a time somewhat in the condition in which Greenland is now, and, indeed, to have been connected with Greenland in this or in earlier times. Such a junction, cutting off access of the Gulf stream to the polar sea, would, as some think, other things remaining as they are, almost of itself give glaciation to Europe. Greenland may be referred to, by way of comparison, as a country which, having undergone extreme glaciation, bears the marks of it in the extreme poverty of its flora, and in the absence of the plants to which its southern portion, extending 6° below the arctic circle, might be entitled. It ought to have trees, and might support them. But since destruction by glaciation, no way has been open for their return. Europe fared much better, but suffered in its degree in a similar way.

Turning for a moment to the American continent for a contrast, we find the land unbroken and open down to the tropic, and the mountains running north and south. The trees, when touched on the north by the on-coming refrigeration, had only to move their southern border southward, along an open way, as far as the exigency required; and there was no impediment to their due return. Then the more southern latitude of the United States gave great advantage over Europe. On the Atlantic border, proper glaciation was felt only in the northern part, down to about latitude 40°. In the interior of the country, owing doubtless to greater dryness and summer heat, the limit receded greatly northward in the Mississippi valley, and gave only local glaciers to the Rocky mountains; and no volcanic outbreaks or violent changes of any kind have here occurred since the types of our present vegetation came to the land. So our lines have been cast in pleasant places, and the goodly heritage of forest trees is one of the consequences.

The still greater richness of Northeast Asia in arboreal vegetation may find explanation in the prevalence of particularly favorable conditions, both ante-glacial and recent. The trees of the miocene circumpolar forest appear to have found there a secure home; and the Japanese islands, to which most of these trees belong, must be remarkably adapted to them. The situation of these islands—analogueous to that of Great Britain, but with the advantage of lower latitude and greater sunshine—their ample extent north and south, their diversified configuration, their proximity to the great Pacific Gulf stream, by which a vast body of warm water sweeps along their accentuated shores, and the comparatively equable diffusion of rain throughout the year, all probably conspire to the preservation and development of an originally ample inheritance.

The case of the Pacific forest is remarkable and paradoxical. It is, as we know, the sole refuge of the most characteristic and wide spread type of miocene conifer, the Sequoias; it is rich in coniferous types beyond any country except Japan; in its gold-bearing gravels are indications that it possessed, seemingly down to the very beginning of the glacial period, magnolias and beeches, a true chestnut, Liquidambar, elms, and other trees now wholly wanting to that side of the continent, though common both to Japan and to Atlantic North America.* Any attempted explanation of this extreme paucity of the usually major constituents of forest, along with a great development of the minor, or coniferous, element, would take us quite too far, and would bring us to mere conjectures.

Much may be attributed to late glaciation; something to the tremendous outpourings of lava which, immediately before the period of refrigeration, deeply covered a very large part of the

forest area; much to the narrowness of the forest belt, to the want of summer rain, and to the most unequal and precarious distribution of that of winter.

Upon all these topics, questions open which we are not prepared to discuss. I have done all that I could hope to do in one lecture if I have distinctly shown that the races of trees, like the races of men, have come down to us through a pre-historic (or pre-natural-historic) period; and that the explanation of the present condition is to be sought in the past, and traced in vestiges, and remains, and survivals; that for the vegetable kingdom also there is a veritable archæology.

THE VINEYARD.

Raisin Making in Spain.

W. B. West, of Stockton, has written another letter to the *Bulletin* from Europe, this time describing what he saw in the Malaga raisin district of Spain. We quote the following interesting paragraphs: I must confess that my impression of the raisin district was not correct. I had always pictured to myself the Veja of Malaga, with its fertile land, the home of the raisin vineyards. This is not the case. A large portion of the moist, rich, level land is in sugar cane and other crops, with only a few vineyards; on the higher and drier portions, as well as the hillsides, are the majority of the raisins produced.

California's Resemblance to Spain.

Any one familiar with California cannot but be struck with its resemblance to Spain—the same hot, sun-burned country, the same red clay and slate and shale. This part is especially like the foothills of the Sierra Nevada. There are abrupt mountains wholly barren, then there are many little hills which slope off to the sea. These have soil enough in most cases to produce something. Where they are not too rocky they are planted in olives and grapes. Many vineyards are on comparatively level ground on the higher portions of the veja. In the ravines and low flats between the hills where the land can be irrigated, lemons are grown, and make quite a profitable crop, as they are early in market.

This season has been one of unusual drouth, no rain since April, and everything suffers. The vines have, most of them, lost their leaves; the lemons that have had but little irrigation are wilted, and will, if no rain falls, soon lose their crop. Everything looks dry and parched. They have had but slight rains for the four years past, which makes the springs low.

The Vineyards.

On the rich bottom lands there are a few vineyards. They are quite thrifty and produce good crops. They are irrigated in the month of May. Of the character of the raisins produced I am not able to say with certainty. Some say they are good, and others that they shrivel up after being packed, although at first they appear good. By far the greatest portion of the raisins are produced upon high, dry flats and steep hillsides, some of the vineyards extending down to the Mediterranean sea. The soil, wherever I have been, is a strong rocky loam, sometimes red, sometimes more of a yellow cast, very full of stones, in some cases the whole surface was covered so that no soil could be seen. I have seen vines producing good crops on hillsides so steep that it is with difficulty that a person can pick the grapes. In the most thrifty vineyards—those in Veja—the vines will equal many in California, but those on the dry land are very small. These vineyards are not planted in such regular rows as we find in California, but are often very much out of line. When a vine dies out it is the custom to layer in its place, and if it is a foot or so out of the row it is not noticed; it is not of so much importance, as they work the ground wholly by hand, giving it two workings in the year.

The harvest commences in dry seasons like this about the fifth of August, and continues about a month. Upon the richer lands they are later. The reason for their being a month earlier than California I attribute to the climate being milder in the months of April and May, and the nights being warmer throughout the year. It may be that their maturity is hastened by the manner of planting. The crowns of the vines only are level with the surface, the dirt being drawn away from them and hilled up between the rows, leaving the vines in little hollows. The manner of pruning is like ours, by the short spur system, leaving from three to five spurs, which are cut back to one eye. Sometimes, when the vine is quite thrifty, a shoot is left some three feet long, but this is not considered good culture, and when vineyards are let out they have it understood that not more than one eye shall be left.

The average yield is from one to three pounds of grapes per vine upon the hill and dry plain vineyards. The irrigated vineyards upon the Veja produce more, but as they are limited, their product would not change the estimate materially. This low average will probably astonish some of our cultivators, but it is fully as great as any I have yet seen, either in France or Spain.

Kind of Grapes.

The only grape they plant here is the Muscatella. No one would think of using any other for raisins. A few other varieties are still among the vineyards for eating, but no other

raisin grape is countenanced. The Uva Large I have seen and taken pains to inquire about, and find that, although cultivated in some places, it is not a favorite here, where the Muscatel can be produced. The price of raisins is unusually low, and the production of Muscatellas in excess of the demand, so that nothing but first-class raisins are wanted. The Uva Large is smaller than the Muscatella, tender and transparent. The raisins look well, but shrivel more than the Muscatella. It has three good sized seeds, and is a very abundant bearer. I will now speak of the character of the grape known here as the Muscatella. I find no one who grows the Muscat of Alexandria, so that they cannot be compared upon the spot. It is above the average size of the Muscat or Alexandria as it is produced in California; although this is a year of unusual drouth, it is of a much more delicate character. The skin is thinner, and the seeds much smaller and more tender. It does not have so strong a musk flavor. That it is not the Muscat of Alexandria I think any one of experience will see directly.

The climate seems to be perfectly adapted to this grape. Their mode of culture, working all by hand, and the exceedingly small amount produced per vine tends to the production of large fruit. I have bearing vines on my ranch at Stockton from a vineyard near Malaga. The grapes are not so delicate as those produced here. Still they are superior to the Muscat of Alexandria. My vineyard is not favorable to the Muscat family, and I believe there are many places in California better adapted to their culture than the heavy soils of San Joaquin county.

Another point that I notice in these grapes as well as in others, there is much difference in the size of the grapes upon the same bunch. Ours are much more uniform.

Drying the Grapes.

Their mode of drying is in the sun upon platforms. Drying by artificial heat is not looked upon as a success. One or two parties who have late grapes finish up their crops in drying rooms. The platforms are built upon the sides of the hills, with an aspect to receive the full benefit of the sun. If the ground is level, which is not often the case, they build a back side wall of masonry and fill in with dirt. They dry wholly upon the ground, using no cement or anything but the earth. The platforms are divided into beds of about 15 feet wide, between each two beds a path, and on the outside of them is a low wall of stone or brick about ten inches high; through the center also is a row of bricks. They are to support the cover of boards. The beds are made so that no rain can get into them from the path.

The pitch or angle is from thirty to forty-five degrees, according to the hill. They must be steep enough to carry off the water. Sometimes they are built upon level ground. They then use canvass covers, stretched over the ridge pole. Sometimes corrugated iron is used, by having one side of a bed, say eight feet wide, made one foot higher than the other. Boards are mostly used upon the platforms, when there is slope enough to carry off water. They are a little longer than the width of the beds, say 16 feet by 1 foot wide. They are lapped over each other from bottom to top. The iron covers are the best, and in the end, perhaps, the cheapest.

Some people will be surprised, as I was, to learn that they take no precaution to keep the dust from the grapes. They grow by the side of roads quite as dusty as any we have. The platforms are not free from dust. Still, it does not seem to adhere to the raisin, but they say it preserves the bloom.

In building platforms I should be governed by the locality. If upon rolling land, where the inclination necessary can be had without much expense, I should build inclined platforms; but upon level lands, where stones for back and side walls are expensive, I would build a level floor and cover with canvass or corrugated iron.

If it is necessary to hurry up the drying of the grapes, they are covered after three days; but if there is no hurry, the covers are not put on. By following their methods I believe we can dry our grapes in the same time that they do here—that is, in fifteen days. I have found grapes under the boards to be quite warm in the morning, but we must always remember that the nights are always warmer than in California.

Canvass covers do not hold the heat as well as boards, and upon level platforms the grapes are from two to three days longer in drying, but are found to be quite convenient in case of rain; the men can work under them. Corrugated iron covers are much the best, and keep the heat in.

The climate during the month of August is not so dry as ours—I speak of the country east of the range. Although it seldom rains and the dew is not heavy, the prevailing wind is not so dry. The wind from the north is soft and balmy, containing a little moisture, but the east and south is very dry, shrivelling up the grapes. The south is especially a burning, desiccating wind. Most of the raisins made in California are too dry. They should even be covered at midday. We are having quite a heavy rain, and many of the platforms have the remains of their crop on yet, but they are in no danger of injury.

Gathering the Grapes—Sorting.

In gathering the crop the vines are gone over carefully, and only such bunches as are perfectly ripe are picked. They pick into round, flat

baskets, only one tier high, and never upon each other. They are also careful not to touch the bunch in gathering. They carry them to the platform upon their heads. They are laid quite thickly upon the ground, with their best side down. Every grape-grower knows that one side of a bunch of grapes looks better than the other; the side which shows the most stem should be placed uppermost. The reason for this is that the best grapes being upon the ground do not receive the direct rays of the sun until almost cured, which makes them handsomer and preserves their bloom. After eight or ten days they are looked over, and all that are cured are cut out and the rest are laid again upon the ground, just as they were before, and not turned, as is supposed to be necessary by some. The process of curing lasts usually 15 days. An experienced workman now takes them up, rejecting those that are not cured, and places them carefully upon a tray. They make two qualities, according to the color, which is quite unnecessary, as they assume the same color after being packed a short time.

Classification.

They are taken to an assorting shed where each bunch is classified according to the average size of its grapes. They cut out all over and under the size of the average bunch; each size is placed in separate trays. Some packers make five separate classes, some three, of the best. They are distinguished by the number of crowns. Then there is a poorer kind called Best London Layers—and one called Layers. They also have a seedless kind which is sifted out of the whole lot. The loose Muscatels are made in the classification as will be explained. The No. 1, No. 2 and No. 3 are very fine, extra size and great care is taken in packing. They use a wooden form of the size of the box and one inch or more high. The bottom of this is covered with very fine fruit, which are pressed down separately with the thumb, after which the sides are gone over in the same manner. The center is next filled in, the whole is pressed down slightly with a board, and the layer put on, which is arranged with great care. They are not so dry as the balance of the box. The severe classification which they have undergone has diminished the number of grapes to five or six a bunch. These are arranged in rows very regularly. After this is done, each one is raised and a raisin is put under for a cushion, as they call it. The reason for this is, they press out the upper raisin and make it look larger.

Curing Pressing and Packing.

The upper tier being not so well cured as the rest, they are put in the sun several days. After being fully cured they are pressed. The pressing injures some of the top layers, so they have to be replaced, and every one has to be lifted and the cushion turned over. This gives them a fresh look. The papers are then put on and the forms put in the sun to heat, after which they are packed. The reason for packing warm is that they have a fine perfume on being opened, which they would not have if pressed cold. But little care is taken with the layers, as they are a cheap kind. They are mostly used in the United States, but the demand for better kinds is growing. The loose Muscatels are the single grapes which are cut from the bunches, and are of the best quality. They pick the largest out for first quality.

I have given the method of packing, not that I should wish any one to follow it. This can hardly be done at the price labor is in California. It costs one day's labor to pack a box of either of the three best kinds. They are obliged to handle the fruit over so many times that it must injure it, and it is not very cleanly.

The most economical way would be to make two classes of loose Muscatels, which are much sought for and really are cheap and good, as they have no stems, and have not been handled so much. If layers are in demand they could be easily made by putting in good whole bunches, but they are fast going out of fashion; perhaps that the new style or packing excludes most of the best fruit from them.

Prices of Labor.

In the price of labor these people have a great advantage. The wages of the working man or woman is very low. I cannot see how they can get the necessities of life, as provisions are high.

The following has been given me by reliable parties: For digging in the winter, done with a hoe with a short handle with a long blade, very hard work, 30 cents per day without board. For picking the crop, 15 to 17 cents, and in some cases as high as 30 cents and board. I found only one man who paid the latter price. For packing—experienced men—30 cents and board. They do not live very high, so that we can estimate the board at 15 cents per day. The foreman upon one of the largest places, where much responsibility is attached, gets \$20 per month and house rent. He is considered a very fortunate man, as he is employed the year round. When we consider that these workmen do not get steady work, we can imagine them to be poorly off.

The Business Overdone.

And now about the proprietors. The great demand for raisins stimulated the business so much that if these people are to be believed the raisin crop is much in excess of the real demand, and they are now selling for little if anything above cost of production. I am inclined to believe that they do not more than pay expenses, and very low interest. It must, however, be remembered that almost every branch of industry in all parts of the world is now suffering. People are economizing, and why should not a luxury like raisins suffer also?

*See, especially, report on the fossil plants of the auriferous gravel deposits of the Sierra Nevada, by L. Lesquereux; Mem. Mus. Comp. Zoology, vi., No. 2. Determinations of fossil leaves, etc., such as these, may be relied on to this extent by the general botanist, however wary of specific and many generic identifications. These must be mainly left to the expert in fossil botany.

†Sir Joseph Hooker, in an important lecture delivered to the Royal Institution of Great Britain, April 12th, insists much on this.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

An Instrument of Certain Sound.

The "declaration of purposes" with reference to the formation of a new Constitution which was adopted by the State Grange, and which we print upon this page, is an instrument of no uncertain sound. It is a frank and open utterance whose manifest spirit is truth and justice. Although there may be difference of opinion concerning some of the individual propositions made, there can be no doubt, we think, that the affirmation of belief as a whole is one which will command the approval and enlist the support of all right-minded citizens. Although promulgated by a body which represents one class of our population, it bears upon its face the impress of a determination to secure the highest and widest general good. This being its manifest spirit it deserves, and will, we believe, receive, the respectful attention of all thinking men and win them to new efforts to secure the triumph of right at the hands of the Convention now in session. It is our recommendation that the manifesto of the State Grange be discussed point by point by all agencies working for the public benefit, and thus its true positions will be fortified and enforced upon the attention of the people's delegates at Sacramento. The Grange may congratulate itself on having struck a clear key-note on great needs of the people at this important time in public affairs.

Further State Grange Proceedings.

The State Grange at its last session, held in Sacramento, assumed the affirmative of the following propositions on State policy, as reported by Secretary Amos Adams:

1. A reduction of the salaries of all State officers of at least 25%, and that all fees should be accounted for as public money.
2. That the salaries of State officers should be fixed in the Constitution, giving the Legislature the power to lower, but in no case to increase the salaries.
3. That all revenue necessary for the support of the State, county and municipal governments should be derived from five sources, first, a property tax; second, an income tax; third, a Moffitt bell punch tax; fourth, a license tax; fifth, a poll tax.
4. That property for the purposes of taxation should be defined by the Constitution.
5. That the legal rate of interest should be 7%.
6. That all money of the United States, including subsidiary silver coin, should be receivable for all taxes.
7. That the right of franchise should be given to women.
8. That a residence in the State one year, county 90 days, and election district 30 days, shall be necessary to entitle a citizen of the United States to vote.
9. That suffrage is a duty of citizenship and should be enforced by proper legislation.
10. Equal taxation of all farming lands of equal producing capacity, when similarly situated.
11. In favor of making a local option law constitutional.
12. In favor of a compulsory education law.
13. That the supervisors of each or any county should be empowered to adopt rules to suppress the squirrel nuisance.
14. That the Judicial and general elections shall be held on the same day.
15. That the Legislature should commence on the second Monday in January, and its sessions to be limited to 60 days.
16. That all bills should be read twice, section by section, and yeas and nays called on their final passage. *Provided*, that two readings of a bill shall not take place on the same day.
17. That any person selling or purchasing votes, or who violates a position of public trust by defalcation, speculation or otherwise, should, upon conviction thereof, be forever disfranchised and shall be treated as a felon.
18. That all questions submitted to supreme and district courts shall be decided within six months.
19. That power shall be given the Legislature to establish a reformatory farm.
20. In favor of the speedy construction of the Texas and Pacific railway.
21. That none but those who pay a property tax should be allowed to vote at an election to levy special taxes, except taxes for school purposes.
22. In favor of limiting the debt-creating and money-appropriating power of Supervisors.
23. That the right of eminent domain shall not be abridged so as to prevent legislative action in reference to property and franchises of individuals and corporations.
24. That railways shall be declared public highways, and that the Legislature shall have the right to regulate fares and freights.

The Grange expresses its opposition to the following measures:

1. To class or special legislation.
 2. To the consolidation of the several funds, which were designated for various purposes, and that fund placed under the control of the Regents of the University.
 3. Opposed to the further immigration of Chinese.
 4. Opposed to taxing growing crops.
 5. No State officer shall be interested in any contract or supplies furnished the State.
- We expect to give further mention of the proceedings hereafter.

A Sister's View of the State Grange Meeting.

EDITORS PRESS:—We have been to the State Grange, and I would that every patron, from Del Norte to San Diego, from Nevada's gold-ribbed eastern line to the foam-crested shore of the Pacific, had been there to cast another drop in the great wave of reform that is passing over the world of labor and capital. Oh, ye Grangers everywhere, hearken to our call; we need your help, both in encouraging words and works, while we, under the confusion of these battling powers, are trying to build a temple of Agriculture that will honor the golden soil of our loved State, and give to her sons of labor that prestige resulting from an intelligent organization harmonizing these conflicting powers in all their bearings tending to progression, and an equal adjustment of the wants and demands of society.

I did not enter our sacred Grange portals till Friday afternoon; there I found a band of earnest men and women sagely deliberating upon vital questions of prosperity and good to all; they even dared to say to that august body sitting even now in our capitol hall, to frame a law-web that is hoped to bring about "Heaven's first law, order," in California: In all respectful humility, *we are to be governed*, and are bold enough to say a word, and enter our protest as to the manner in which the governing reins shall be drawn.

Let me now pass from the practical to the social features of our Order, and would say to every matron and husbandman, you that have safely passed the fourth step of our ladder, the gates of the fifth degree are open, and Pomona, the priestess, holding the emblem of plenty in her hands, and with her handmaidens, Ceres and Flora, sit enthroned to welcome one and all of you; and most graciously this Friday night did she greet fifty-eight votaries at her shrine, and replete with good feeling were the greetings of the older initiates to these novices as we joyfully gathered around the tables of this mystic household; these tables, over which presided these goddesses, was spread with fruits and flowers in such orderly confusion as to be in semblance with that nature which delighteth the eye, as well as fill the hands and satisfy the taste with the sweets and rewards of labor.

So merrily did the minutes pass away to the favored ones of the feast, that the evening was fast drifting into the past when, as if to speed time if possible with swifter flying feet, musicians came, and to their inspiring notes the feet and the tongue seemed to run a race, the latter coming out winner in the contest, of course—for, when the dulcet notes were hushed, many a tongue could have joined in gay repartee and badinage, or mayhap chanted the sad refrain of the good-night song.

Saturday night was set apart as a fitting time for the "Grangers' love feast;" though our numbers had now somewhat decreased by a homeward turning, yet there were a sturdy household of brothers and sisters, who, with new and almost an inspiring ardor, seemed to renew their fealty to Grange principles, and to be imbued again with that love of the good and beautiful which bringeth the husbandman and his household into a "closer communion with God through nature's handiwork." Would that I could reflect upon the readers of the PRESS the different shadings of individuality which were given our Order, as its each member painted lights and shadows, playing around and about their own home-made pieces to be placed in this great temple of Agriculture, and the general effect the hammering and hewing of these blocks had upon the community so favored by the presence of these workshops, or subordinate Granges, where this great temple-work is slowly but surely progressing, and is even now dedicated to Equality and Justice to all.

Oh, doubting and criticising world, crude may have been many thoughts, but not the less forcibly were they expressed. We are as a body passing through a crucible of fire; may we hope that, like unto the crude ore, we may be purified and come to the gaze of all, rich in those experiences that will fit us for a higher and better Grange life of earth, and in the end bring us all before that Divine Master who ruleth by love and charity to all.

I have come to Sunday morning, and many of us not yet home. Those brothers who had so ably conducted us through the business of the week, showed the same executive ability in procuring a special car for the homeward-bound patrons. Pleasant chattings, interspersed with singing, whiled away the hours; the only trouble being the good-by at the several stations as we parted from those who, a week since, were strangers, though now separating with a

closer bond of sympathy from brotherly and sisterly intercourse, and with many good wishes and hopes of meeting again next year in the beautiful City of Oaks, and under the happy auspices of the State Grange of California.

MRS. MARIA B. LANDER,
Martinez, Oct. 12th. Sec. Alhambra Grange.

Meeting of the Grangers' Bank Stockholders.

EDITORS PRESS:—The fifth annual meeting of the stockholders of the Grangers' Bank was held yesterday at the bank, and was largely attended.

The old Board of Directors were unanimously re-elected, as follows: G. W. Colby, Butte county; C. J. Cressey, Stanislaus county; C. S. Abbott, Monterey county; J. V. Webster, Alameda county; F. J. Woodward, San Joaquin county; J. C. Merryfield, Solano county; Thos. McConnell, Sacramento county; I. C. Steele, San Mateo county; A. D. Logan, Colusa county; Thos. Fowler, Tulare county; John Lewelling, Napa county. After the election the board met for organization, and G. W. Colby was chosen President; Frank McMullen, Secretary; and A. Montpelier, Cashier and Manager.

The fourth annual dividend was declared of 10% on the capital paid up.

F. McMULLEN, Sec'y.
San Francisco, Oct. 9th, 1878.

Grange Sentiment.

The sentiment of the Grange of this State, when properly understood and interpreted, is the sentiment of permanency, of substantiality, of sobriety. They want intelligence, honesty and virtue to be represented in the exercise of the elective franchise, and a very large majority of the members believe that the social, moral and financial condition of the people would be improved by extending the right of suffrage to women. In the matter of taxation, they believe that all land of equal productive capacity, whether in small or large bodies, should be taxed equally, and that all property should bear a uniform and equal burden for the support of the Government, whether in the hands of the rich or the poor. Communism forms no part of the teachings of the Grange—but an honest, friendly feeling for all mankind is carefully and systematically inculcated. In the matter of labor, the Grange, or the better Grange sentiments, is to prefer the labor of citizens or those who by our laws can become so—but in the laborer they want honesty, reliability and effectiveness; but when they cannot obtain these qualities among white laborers, they reluctantly employ Chinese, and maintain their right to do so on the grounds of self-protection and the protection and improvement of their property.

There is no class of people to which the tramp nuisance is a greater torment or a greater tax upon, than the farmers, and they are naturally very desirous that if any legislation can be devised to remove the cause of this evil or to abate the nuisance, that such legislation be discovered and enacted.

The Grange regards whisky drinking and stock gambling as the two greatest evils and drawbacks to the agricultural sections and to the agricultural advancement of the State, and believe that these evils should be checked by the law-making power—if need be the fundamental law of the State—and look to the Convention now in session for a guarantee of such laws as will check and suppress them.—*Record-Union*.

A THRIVING ASSOCIATION.—The Grangers' Business Association has been passing through a busy season. Manager Steadman and assistants having much to employ them in receiving and shipping wheat, wool, dried fruit, etc., aside from waiting on the scores of customers that daily besiege the store. The Association is now receiving large importations of new goods for the fall trade.—*Healdsburg Enterprise*.

OFFICERS ELECTED.—The California Farmers' Insurance Association has elected the following Directors for the ensuing year: J. C. Merryfield, G. W. Colby, I. G. Gardner, Thos. Flint, G. P. Kellogg, I. C. Steele, A. D. Logan. And at a subsequent meeting of the Directors, the following officers were elected for the ensuing year: Thos. Flint, President; I. G. Gardner, Vice President; Ferdinand K. Rule, Secretary; G. P. Kellogg, Treasurer; A. W. Thompson, Attorney.

EXPORTS OF AMERICAN WINDMILLS.—We read that the exports of windmills from Eastern manufacturing are quite large. A portion of the cargo of a bark which lately loaded at New York for New Zealand consisted of 50 large windmills, ordered by parties in New Zealand, and chiefly for raising water on stock farms, where the wells are sometimes 200 feet deep. They are required to supply tanks at the railroad stations, and for various agricultural purposes. Cuba and South America are both good export markets for this sort of machinery, wind-power being in growing favor on the sugar estates of Cuba to pump molasses, and windmills are occasionally used for similar purposes in the sugar warehouses at Havana and Cardenas. English windmills are made after the old Dutch fashion, with broad fans, and the general construction is heavy.

AGRICULTURAL NOTES.

California.

COLUSA.

RAILROAD LANDS.—*Sun*, Oct. 12: A gentleman residing north of Willows, where the railroad lands were sold last year at from \$15 to \$30 an acre, says that it is making times very hard in that section, and that a great many will not be able to meet the second payment. Land sold at \$30, and \$6 an acre paid down, will not sell for the \$24 remaining on it, and those who had short crops, by reason of the rust, are almost bankrupt. If the decision of Judge Sawyer, a synopsis of which we published last week, is correct, then the railroad will get most of that land wrongfully, and if that decision shall be held correct by the Supreme Court of the United States, then the government ought to afford some relief to the settlers, from whom the action of the government officers took their lands. By the way, we are credibly informed that the railroad had both sides of the Ryan case, published last week, and that the settlers are now taking active measures in the premises, and will ask the United States Attorney General for the use of his name in setting aside the patent. If Carl Schurz opinion is worth anything the patent is voidable, and if Judge Sawyer is right the settlers, who were on the land, before the land was selected, will get it.

THE ABSORPTION OF MOISTURE BY WHEAT.—Most of the wheat grown in the State goes to Europe, and on the voyage absorbs a certain amount of moisture. For this moisture the parties who consume the wheat must pay. It is quoted as wheat in the English markets. The prices paid our farmers are based on English quotations. Then ought not the farmer who has very dry wheat get more for it than one who has damp wheat? If one lot is so dry as to be able to absorb enough moisture to pay the entire amount of freight, and another lot has all it will stand, ought not the former to bring the most? Then if buyers fail to make the proper distinction, is not the farmer justified in seeing that his wheat is in the best possible condition for him? There is no doubt but that dry wheat taken down the river, and across the bay on barges, will increase greatly in weight. Has not the farmer a perfect right to take that method of shipment. If he finds that by storing it on the bank of the river, and shipping by water, he gets more for his wheat than he would by storing on the plains and shipping by rail, is he to blame for so doing?—[The *Sun* is clear on these points.—EDS. PRESS.]

FRESNO.

ACTIVITY.—*Expositor*, Oct. 9: The farmers throughout the county are already preparing their land for next year's crop. From present appearances it is evident that the acreage will be nearly double next season. All who were able to put in crops this year will be able to put in more next season, and those who were too poor to plant this season have found plenty of work through the harvest, and are now in condition to put in grain next year. If this valley is favored with another good season, it will be one of the most flourishing portions of California, and will not suffer so severely by another season of drouth.

MERCED.

AGRICULTURAL SOCIETY.—*Valley Argus*, Oct. 12: The Merced Agricultural and Stockbreeders' Association was organized at Merced on Monday, with the following officers: A. J. Meany, President; Dr. W. A. Washington, Vice-President; N. F. Pickle, Secretary; H. A. Bloss, Treasurer, and G. W. Halstead, Sr., of Snelling; R. A. Carpenter of Plainsburg, and M. Goldman, Charles Searing and M. McClenathan, of Merced, Directors. We understand the Directors have already made arrangements with Mr. C. A. Huffman for the privilege of building a temporary race-track on his land adjacent to the town.

MERCED HOP CROP.—H. F. Buckley informs us that his crop of hops this year amounts to 36,543. His crop last year amounted to 32,703 pounds. Increase over last year 3,540. He has in cultivation 35 acres, and will set out the coming spring 10 acres additional, making 45 acres. He has cultivated hops upon his farm for the last six or seven years and has made profitable crops. As he has increased his facilities for cultivating and curing this valuable article of commerce we may expect in future still better returns. The soil of the Merced river bottom is peculiarly adapted to the production of hops, being moist and rich.

MODOC.

FAUL WORK.—*Adin Hawkeye*: All over our beautiful valley may now be seen busy teams and laborers hard at work securing the products of the season and providing a winter store. Glorious old autumn is upon us and the scene of boyhood's happy hours, of golden fruit and well filled granaries comes vividly to our recollection.

NAPA.

ROUT IN TURKEYS.—*Reporter*, Oct. 12: Mr C. Ruckee, of upper Pope valley, is the champion turkey-raiser of this or any other county. He raises this year nearly 2,000 turkeys, losing by roup about \$600. He has found no remedy for the disease after it has once fastened on the bird. We suggest great cleanliness and continual disinfection as a preventive—the best remedy after all.

TABLE GRAPES FOR THE EAST.—*St. Helena Star*: On last Monday, three car loads of grapes were shipped from different points between

here and Napa for the Eastern market. The grapes are packed in crates, and these arranged in racks in the cars, so that a free circulation of air is secured throughout the entire cargo. In this way about nine tons of grapes are loaded in each car. The walls of the car are hollowed, forming a reservoir, which is filled with about two tons of ice before the car is loaded. This ice is renewed occasionally, as is necessary, especially as the cargo grows older, so that should decay have set in it may be held in check as much as possible. The varieties best adapted to the trip are found to be the Muscat, Malaga, Tokay, Rose, Peru, and others, all being of rather a solid structure and good keepers. The grapes are very carefully picked and handled so as not to bruise them, and on packing them into the car all injured grapes are removed.

MAKING SHERRY WINE.—Napa Register Oct. 12: Mr. J. Mathews built a substantial wine cellar with dwelling overhead, about one year ago on Main street. In the same lot on which the cellar is built, and about 20 or 25 feet distant from it, Mr. M. built last summer, an oven for the making of sherry wine, and of this branch of the business he intends to make a specialty. This cellar or oven is of brick, with hollow walls and ceiling, and has a flat roof; walls and ceiling being coated on the inside with cement to confine the heated air; the floor is of gravel on which are placed planks for the casks containing wine. Mr. Mathews intends to make this season about 1,200 gallons of sherry, the time consumed in its manufacture being about four months. He purchases white wine in San Francisco which is from two to four years of age—the older the white wine, the better will be the sherry made from it. The wine is drawn from the casks in which it is received, and put into others standing on end in the cellar, and there it remains during the baking process. In the manner of heating the wine or baking as it is called, lies one of the secrets, if not the secret, of the making of sherry. A furnace is built in the southwest corner of the building, near the ground, and in this a fire is kept burning during the time specified, at a temperature that is known best to the maker. From the furnace flues extend in the hollow between the two walls, along the west side, across the north end, and down the east side to the chimney, at the southeast corner of the building, 365 feet in length. It will be seen at once that there is a very large surface of that exposure, and that it must be very evenly distributed. The wine having been put in the receiving casks, the thick cellar doors are closed tight and none of the heated air allowed to escape. After the four months of baking have passed, the cellar is opened and the sherry wine is ready for the market, where it sells for from one \$1.50 to \$2.50 or \$3 per gallon.

SAN JOAQUIN.

CHICORY.—*Intendant:* The chicory factories on the San Joaquin river are in full blast. Forty-seven barrels of this coffee adulterant were shipped to San Francisco by steamer *Mary Garratt* Wednesday.

SONOMA.

EGYPTIAN CORN.—*Healdsburg Flag:* Mr. L. Jefferson, of Bailhache's addition to Healdsburg, reports that he has just harvested 80 bushels to the acre from his Egyptian corn field. He planted the white and finds it as easy a crop to grow as broom corn. He plants 16 to 18 inches apart in rows 4½ feet apart, not over two in the hill. He gets 3 to 6 good heads, which he cures on the ground before putting away or threshing. He planted in the middle of May.

STANISLAUS.

WELL BORING.—*News,* Oct. 11: The boring of the artesian well on the Temple ranch, about eight miles south of town, still continues. On Wednesday morning last the well had reached a depth of 274 feet. At a depth of 211 feet a lot of hardpan was passed through, since which time the work has gone on in blue clay. Mr. Amos, the owner of the place, is well pleased with the prospects for a fine flow of water. The work is being done by the Haas hydraulic auger, invested and first tested at Stockton. Thus far, on its second trial, it has done splendid work. There have been no mishaps nor mistakes, and the work is being well done.

TEHAMA.

PEANUT CULTURE.—*People's Cause:* In Antelope valley, near Red Bluff, the Chinese peanut cultivators and their numerous field hands were busy harvesting their peanut crop, and I should judge this popular nut is yielding an abundant harvest. The soil here is not hard to work, and from the topographical position of it, it seems to be easily irrigated. The flume of the Sierra flume and lumber company which runs along within easy distance of some of these gardens brings the required supply of water for irrigating purposes. John Chinaman is not a fast worker by any means, and I think he is inclined to be just as slow about a thing as he can be. The mode of performing the work would not be tolerated in a white laborer; but they have every natural advantage on these little plots which white men are debarred from through the short-sighted, narrow views of the land owners. The locality must of necessity be unhealthy, as the ground is in many places under water all the year round.

VENTURA.

EDITORS PRESS:—Barley is being hauled to tide water as fast as possible, for all are looking for early rains. Corn is going to market quite

freely from the upper part of our valley; that near the coast is not so dry or ripe, owing to the heavy fogs we are having now. Pork is very low, from \$2 to \$3 per hundred, and a great deal in the county is of an unusual good quality. The mountains are covered with good feed, which the rains will spoil, as there is not stock in the county to consume it. Farmers are brushing their rusted wheat-fields, thinking there is enough that will grow for seed next year. No plows have started yet.—CONTRIBUTOR, Scenege, Cal.

The Santa Clara Valley Fair.

We give below the list of premiums awarded in the leading departments of the Santa Clara Valley fair, held at San Jose the first week in the present month:

Horses.

Thoroughbred—Stallion, 3 yrs old, Bob Wooding, Wm. Boots; stallion, 2 yrs old, Kingston, Wm. Boots; stallion, 1 yr old, Johnnie A, Wm. Boots; mare, 3 yrs old, Mollie Hall, W. H. Hall; mare, 1 yr old, Mollie H, W. H. Hall; sucking filly, San Jose Beauty, W. H. Hall.
Roadsters—Stallion, 4 yrs old, Granger, J. A. Evans; stallion, 3 yrs old, Excellence, Ben E. Harris; mare, 4 yrs old, Lady Sherman, P. J. Williams; mare, 3 yrs old, Madona, Wm. Johnson.
Graded Horses—Stallion, 3 yrs old, Eureka, John Pfau; stallion, 2 yrs old, Beaconsfield, Joseph Wilson; stallion, 1 yr old, Success, Ben E. Harris; mare, 3 yrs old, with colt, Frankie Eaton, Ben E. Harris; mare, 1 yr old, Bay Filly, Wm. Boots.
California Draft Horses—Stallion, 3 yrs old, Young Rawley, C. F. Lewis; stallion, 1 yr old, Rawley, Jr., C. F. Lewis; sucking stallion, Robert, C. F. Lewis; mare, 3 yrs old, Susan, C. P. Bailey; mare, 2 yrs old, Minnie, C. F. Lewis; mare, 1 yr old, Belle, C. F. Lewis; span in harness, Mollie Darling and Jennie, Thomas Blake; imported draft stallion, Bayard, J. McDonald.
Carriage Horses—Span, Doc and Charlie, Cal. Martin; single buggy horse, George Patchen, W. W. Wright.
Sweepstakes—Stallion, of any age or breed, Granger, J. A. Evans; mare, of any age or breed, Manic Hall, Wm. H. Hall.
Horses for all Purposes—Stallion, Royal George, Cal. Martin.
Families—Stallion, with colts, Ethan Allen and 4 colts, W. T. Mason; mare, with colts, Miami and 4 colts, Wm. Boots.
Jacks—Smuggler, R. P. Saxe.

Cattle.

Durhams—Bull, 4 yrs old, Mason Duke, C. B. Hensley, 1st prem; Red Thordale, Col. Younger, 2d prem; bull, 3 yrs old, Airdrie Thordale, Col. Younger, 1st prem; Duke of Gabilan, J. D. Carr, 2d prem; bull, 2 yrs old, Sixth Duke of Gabilan, J. D. Carr, 1st prem; Oxford Duke, Jones & Haggin, 2d prem; bull, 1 yr old, First Duke of Alameda, Jones & Haggin, 1st prem; Maynard, J. D. Carr, 2d prem; bull calf, Thordale, Col. Younger, 1st prem; Mason Duke Second, Jones & Haggin, 2d prem; cow, 3 yrs old, First Louan of Avenue Ranch, Jones & Haggin, 1st prem; First Golden Gate, Col. Younger, 2d prem; cow, 2 yrs old, Dolly Thordale, Col. Younger, 1st prem; Second Rose Forest Home, Col. Younger, 2d prem; cow, 1 yr old, Red Dolly Second, Col. Younger, 1st prem; Jesse Maynard, Jones & Haggin, 2d prem; heifer calf, Fourth Rosa Nell, Col. Younger, 1st prem; Lady Mary Second, Jones & Haggin, 2d prem.
Herefords and Holsteins—Bull calf, Snow Boy, Peter Coutts, 1st prem.
Devons—Cow, 3 yrs old, Nellie, Francis Smith, 1st prem.
Alderneys and Ayrshires—Bull, 3 yrs old, Scarboro Chief, Ayrshire, Peter Coutts, 1st prem; Prince, Alderney, C. B. Polhemus, 1st prem; Fair Oaks, Alderney, John Cooney, 2d prem; bull, 2 yrs old, Adonis, Ayrshire, Peter Coutts, 1st prem; Dan Hickey, Alderney, F. Smith, 1st prem; bull, 1 yr old, Brigham, Alderney, C. B. Polhemus, 1st prem; Frank Smith, W. T. Mason, 2d prem; bull calf, General Sherman, Peter Coutts, 1st prem; cow, 3 yrs old, Maggie Douglass, Peter Coutts, 1st prem; Linda Douglass, Peter Coutts, 2d prem; Bessie, C. B. Polhemus, 1st prem; Lulu, F. Smith, 2d prem; cow, 2 yrs old, Edith Brown, Peter Coutts, 1st prem; Bellina, Peter Coutts, 2d prem; Daisy, C. B. Polhemus, 1st prem; cow, 1 yr old, Lady Chapman Fourth, Peter Coutts, 1st prem; Lady Merritt Second, Peter Coutts, 2d prem; Topsy, C. B. Polhemus, 1st prem; Dewdrop, C. B. Polhemus, 2d prem; heifer calf, Miami, Peter Coutts, 1st prem; Edna Brown, Peter Coutts, 2d prem.
Sweepstakes—Bull, of any breed or age, Sixth Duke of Monterey, J. D. Carr, 1st prem; Mason Duke, C. B. Hensley, 2d prem; cow, of any breed or age, Fuchsia Second, Wm. Quinn, 1st prem; First Louan of Avenue Ranch, Jones & Haggin, 2d prem; dairy cow, Linda Third, Peter Coutts, 1st prem; cow, with calf, Third Maid of Monterey, J. D. Carr, 1st prem; Maggie Pearce, Peter Coutts, 2d prem.
Graded Cattle—Cow, 3 yrs old, Fanny Forester, A. Agnew, 1st prem; Big Baby, N. B. Edwards, prem rec; cow, 2 yrs old, Mary, Wm. Quinn, 1st prem; cow, 1 yr old, Irene, A. Agnew, 1st prem.
Herd of Cattle—Herd of cattle, 2 yrs old and upward, Sixth Duke of Gabilan and 4 cows, J. D. Carr, 1st prem; Red Thordale and 4 cows, Col. Younger, 2d prem; herd, 1 yr old and upward, First Duke of Alameda, Jones & Haggin; bull, of any breed or age, with 4 or more of his calves, Master Maynard, Jones & Haggin. Committee rec sp prem to Ayrshire herd, owned by Peter Coutts.

Sheep and Goats.

Merinos and Southdowns—Jesse D. Carr, of Salinas City, all premiums for Spanish Merinos and Southdowns, and sweepstakes for best ram and ewe for all purposes.
Cotswolds—George McCracken, of San Jose, all premiums on Cotswolds.
Angora Goats—All premiums to Hall & Harris, of Hollister.

Swine.

Boar of any breed or age, Prince of Linden, R. P. Saxe. Sow of any age, no name, B. S. Moody. Six pigs under 6 mos, George McCracken.

Poultry.

Buff Poles, white Cochins, Golden Pheasants, C. B. Turner. Brown Leghorns, W. H. Scott. Golden Bantams, P. J. Williams. Silver-spangled Poles, golden-bearded Poles, Wm. Quinn. Rose game, P. J. Williams. Plymouth Rocks, white Leghorns, Mrs. L. J. Watkins. White Poles, W. A. Lattin. Game Bantams, B. J. Rhodes. Partridge Cochins, C. B. Turner. Pekin ducks, T. A. Freeman. Bronze turkeys, George McCracken.

Farm Products.

Wheat, E. H. Lenox; oats, Jesse Hobson; barley, Frank Hamilton; California rye, Frank Hamilton; flour, Moody Bros.; flaxseed, Isaac Dixon; salt pork, dried beef, hams, bacon and lard, Andrews & Cockendall; peppermint oil, Frank Hamilton; olive oil, J. B. Ruffino.

Garden Products.

Tomatoes, W. E. Beckwith; Fulton potatoes, Andrews & Cockendall; cantaloupe, W. E. Beckwith; onions, W. Boots; squash, cucumbers and turnips, W. E. Beckwith.

Fruits.

Currents, F. A. Wilcox; barberries, F. Wilcox; foreign grapes, J. H. Dixon; peaches, Mrs. Sarah Keeler; strawberries, W. Boots; apples and pears, C. P. Beal; 12 varieties pears, L. H. Bascom; best single bunch foreign grapes, J. J. Roberts; quinces, L. H. Bascom; pippin apples, D. E. Gish; collection grapes, J. H. Kelly; cher-

ries, Allen Flickinger; 17 single varieties apples, W. Boots; 5 varieties plums, W. Boots.

Canned Fruit, Jelly, etc.

Canned fruits, sweet pickles, Mrs. L. J. Watkins; pickles, T. D. Appleby; fruit in glass, San Jose Fruit Packing Co.; exhibit jellies, Mrs. G. K. Hostetter.

Nuts.

English walnuts, D. B. Moody; black walnuts, L. H. Bascom; soft-shell almonds, E. L. Wright; hard-shell almonds, Miss Ella L. Hills; chestnuts, A. M. Ogier.

Plants and Flowers.

Greenhouse plants, Jackson Lewis; hanging basket, Mrs. Jackson Lewis; cut flowers, collection roses and dahlias, vases and bouquets, Mrs. W. H. Lattin; parlor bouquets, Mrs. Jackson Lewis; assorted plants, exhibit amateur of flowers, hand bouquets, T. D. Appleby; hardy ornamental plants, Wm. O'Donnell; mammoth sunflower, Mrs. L. J. Watkins; Wm. O'Donnell, sp prem rec for fruit trees.

Native Wines and Liquors.

Wine and cider vinegar, J. H. Kelly.
Dairy Produce, etc.
Cheese, Isaac Dixon; butter, Miss Amanda Rogers; comb honey, W. Erskon & Co., hon mention. Committee awarded first premiums for butter and cheese to Wm. Erskon & Co., but as the articles were not entered in the name of producer, they could not compete.

Mechanical.

Farm gate, J. Kiu Parker; self-reaper and binder, Farmers' Union; wine and cider press, prem rec; sackholder, H. M. Covert, prem rec; California tire setter, sp prem rec; iron farm wagon, prem rec, sulky plow, horse power, Sweepstake Plow Co.; seed sower, horse rake, harrow, gang plow, San Jose Foundry; cultivator, Wm. Fruhling; windmill, T. E. Martin.

Wagons and Carriages—Faru wagon, Auzeais & Pomery; one-horse top buggy, H. J. Haskell; open buggy, Hanneinan & Maloney; family carriage, Hatman & Normandin; two-horse top buggy, Hatman & Normandin; express wagon, John Christian. Committee rec sp prem to W. T. Adel for express wagon.

Cabinet Ware—Parlor and chamber furniture, upholstery, Bennet, Patterson & Co., San Jose.

Bread and Pastry.

Baker's bread, C. McGettigan; biscuit, Miss Della Rogers; soda biscuit, corn bread, Mrs. H. E. Hills; brown bread, Mrs. L. A. Wilcox; wheat bread, Mrs. L. J. Watkins; pastry, Mrs. J. H. Kelly; Boston brown bread, Mrs. F. Smith; cake, three kinds, Miss Emily L. Peelor.

Embroidery, Needle and Fancy Work.

Embroidered net dress, Miss Eva Bascom, prem, rec; spatter work, Miss Abbey Lewis; table cloth, lambrequin, worsted work, Mrs. C. F. Willey; sea moss album, Mrs. A. G. Nye; chenille work, F. W. Wolff; work in card board, Mrs. J. J. Hyde; embroidery screen, Emma Gam-bert; robe and mat, Angela Robe and Glove Co.; tidies; hand-sewing, Mrs. C. B. Turner; cambric embroidery, Mrs. W. C. Wilson; knitting, Mrs. E. P. Beal; silk quilt; patchwork, Teresa Wood; bead work, Mrs. E. L. Bradley; crochet work, F. Lasano; cotton tidy, Mrs. C. B. Turner; sofa cushion, Mrs. E. L. Bradley; feather work, Miss Libbie Soderer; wax work, Mrs. L. M. Curtis; hair wreath, Miss S. M. Swope; point lace handkerchief, ties and cuffs, Mrs. O. S. George; skeleton leaf work, Jennie C. Gould; worsted work, Mrs. Chas. Barr; lace netting, hair wreath, Miss Lucy Elitch; tufted work, Miss Lizzie Agnew; moss work, Mrs. A. G. Nye; child's clothes, home made, Mrs. E. V. Thorne; braid work, F. W. Wolff; fancy picture frames, Miss Emma Davis; netting, Mrs. J. J. Hyde; canvas work, Mrs. C. B. Turner; home-made shirt, Miss Emily Peelor; embroidered table-cloth, Mrs. C. F. Willey; rug mat, Mrs. Frank Smith; lamp mat, Mrs. L. B. Davis; moss cross, Miss Libbie Soderer; point lace work, Mrs. O. S. George; skeleton leaves, Mrs. Jackson Lewis; moss bouquet, Mrs. M. S. McMahon.

Upper Sacramento Fair.

This fair was duly held at Chico, and much interest was manifested. From the premium list, as printed in the *Record*, we select the awards for leading agricultural exhibits:

Horses.

Thoroughbred—Stallion, 3 yrs old, Telegraph, James Keesecker; mare, 3 yrs old, Hattie Bay, J. T. McIntosh; families, Blackbird and 13 colts, D. M. Reavis; Uncle Sam and colts, A. B. Collins.
Graded Horses—Stallion, 3 yrs old, Blackbird, D. M. Reavis; mare, 3 yrs old, Lady Volscian, D. M. Reavis.
Horses of all Work—Honest Signal, Horace Eldred; Frank Tolman, hon mention, A. M. Bernard; 2 yrs old, Signal, Horace Eldred; mare, 3 yrs old, Mattie Solomon, D. M. Reavis; Amanda, A. B. Collins; Birdie, D. M. Reavis; Manie Clark, D. M. Reavis.
Draft Horses—Four yrs old, Bloomington, D. M. Reavis.

Roadsters—Stallion, 3 yrs old, Prompter, J. T. McIntosh; gelding, 4 yrs old, Buckskin, J. A. Turner; mare, 3 yrs old, Bessie, J. T. McIntosh; 2 yrs old, Irene, J. T. McIntosh.

Carriage Horses—Best span, H. A. Eldred.
Roadster Teams—Best team, Fanny and Mack, C. C. Mason; Shoo Fly and Nigger, Thomas Rogers, hon mention.

Saddle Horses—Charlie, Allen Henry.
Colts—Yearling horse colt, Grey Dick, A. B. Collins; sucking horse colt, Albert, John Bidwell; sucking mare colt, Lulu, D. M. Reavis.

Sweepstakes—Stallion, of any age, Blackbird, D. M. Reavis; mare, of any age, Mattie Solomon, D. M. Reavis; exhibit of roadsters, Blackbird, Lady Volscian and Heitzig, D. M. Reavis.

Jacks and Mules—Best Jack, Kentucky, Bidwell & Decker; mule, 2 yrs old and over, M. Merrill; span of mules, J. M. Decker.

Cattle.

Durhams—Bull, 3 yrs old, Stonewall, D. M. Reavis; Oseola, hon mention, John Bidwell; 1 yr old, Ninth Duke of Chico, D. M. Reavis; bull calf, Louan Eighth, D. M. Wick; cow, 3 yrs old, Venus, M. Wick; Flora Hastings, D. M. Reavis hon mention; 2 yrs old, Frantic Louan First, M. Wick; 1 yr old, Frantic Louan Second, M. Wick; heifer calf, Thirteenth Belle of Chico, D. M. Reavis.

Graded Cattle—Bull, 3 yrs old, Comet, J. Bidwell; heifer calf, Bessie, John Bidwell.

Sweepstakes—Bull, of any age or stock, Stonewall, D. M. Reavis; cow, of any age or stock, Flora Hastings, D. M. Reavis.

Herds—Herd, Stonewall, Flora Hastings, Lady Meldon, Fanny Fern and Cora Lee, D. M. Reavis; herd, under 2 yrs, Ninth Duke of Chico, Thirteenth, Fourteenth, Fifteenth and Sixteenth Belles of Chico, D. M. Reavis.

Sheep and Goats.

All sheep premiums to John Bidwell for French and Spanish Merinos.

Two premiums to M. Wick for Angora goats, and hon mention to H. Cummings.

Swine.

Berkshires—Boar, W. M. Thorp; sow, Thomas E. Boucher.
Essex—Boar and sow, John Bidwell.
Poland-China—Boar and sow, J. Keesecker.
Graded Swine—Five pigs, John Bidwell.

Poultry.

J. F. Dunn—Silver-Spangled Hamburgs; John H. Guill, 5 varieties and Brown Leghorns; C. C. Gore, White Leghorns and Dominiques; W. M. Thorp, Bronze turkeys.

Field Products, Etc.

John Bidwell—Sack of flour; J. P. Helphenstein, sack

of wheat; M. Wick, sack of barley; Daniel Bidwell, potatoes and squashes; Thomas Rodgers, watermelon.

Domestic, Etc.

John H. Guill—Honey; John Newbath, pickles; Mrs. C. V. Hobart's variety of canned fruit; Miss Mary Gilley, variety of jellies; Mrs. John Bidwell, variety of preserves; Mrs. J. Helphenstein, boiled ham, variety of butter and 10 pounds of lard; Mrs. Paden, domestic bread; Mrs. Swarengin, corn bread; Mrs. C. L. Stilson, salt rising bread.

Fruits.

Nine premiums awarded to John Bidwell for different fruits; Daniel Bidwell, apples; John Guill, pears and grapes; Mrs. J. Guill, grape syrup.

Special Premiums.

John Guill—Vinegar; John Bidwell, butter; Mrs. R. R. Fimple, butter, prem by board; Miss M. Dies, salt rising bread; W. B. Pratt, sack of flour; Willie Parr, box of figs; Mrs. C. V. Hobart, pickles and jellies; Mrs. J. Bidwell, canned fruit and tropical plants; Mrs. Fimple, jellies; Mrs. Helphenstein, preserves; Wm. Bonness, apples and pears; J. B. Mullen, potatoes and apples; H. C. Hoose, Snowflake potatoes and apples, hon mention; Allen Hall, growing cotton plant, hon mention; Mary Wood, aged 15 yrs, pan biscuit, 1st prem, Bowen Bros; Lillie Bidwell, aged 17 yrs, pan biscuit, 2d prem, Bowen Bros; John H. Guill, collection of plants and hardwood; J. B. Clark, mountain wood and nutmeg tree.

News in Brief.

TURKEY is fast fixing up with Crete. LOCUSTS are ravaging Japan rice plants. FINE grapes were grown this season at Silver City, Nevada.

TERRIFIC storm along the Massachusetts coast on October 12th.

CALIFORNIA salmon eggs are shipped at times to Europe.

THE United States have an average of over 180 fires per day.

EBENSBURG, Pa., is almost completely in ashes. Loss between \$350,000 and \$400,000.

PREMATURE fishing in September destroyed millions of prospective salmon.

PRESIDENT HAYES has recognized the independence of Roumania.

NOW comes the news that Turkey is again on the most friendly terms with Russia.

SIR MING COOK, the Chinese consul at San Francisco, has entered Hastings' law college.

TWO consecutive dry seasons have, it is thought, caused the dying of pine trees noticed now in Arizona.

SPAIN does not like the growth of English influence in Morocco. She may possibly pick a quarrel.

A DEPRESSION in trade, exceeding anything experienced in 75 years, prevails in the West Indian islands.

THE Puget sound white potato crop is said to be a partial failure. Season too dry except in low or bottom lands.

A LITTLE boy in Nevada county drank concentrated lye, supposing it to be milk. He died in dreadful suffering.

A FIRE near Moscow destroyed 23 stone houses, 31 wooden houses, and 70 warehouses, valued at about \$1,600,000.

HEAVY and continuous floods are devastating the lower countries of Japan. Seven villages are reported entirely submerged.

THE wagon and agricultural implement dealers report business more active than they ever before knew it in their line in Utah.

AN immense number of bogus coins are circulating in Idaho. The are made of block tin, hismuth and powdered glass.

THERE were 696 deaths from cholera at Casa Blanca, Morocco, between the 7th and 24th of September. The epidemic is now decreasing.

JOHN BIDWELL, of Chico, has received an order from the Agricultural Department at Washington for 100 bushels of barley for distribution.

THE number of standard silver dollars coined to date is about 17,000,000, and it is not believed there are more than 2,000,000 in actual circulation.

THE attempt to establish direct communication between San Francisco via the Colorado river and Fort Yuma is abandoned for the present.

SWIFT county, Minnesota, has had a big prairie fire. Many farms, with houses, barns, cattle and grain were destroyed. Many farmers are destitute.

FORTY or 50 men have been sentenced to aggregate fines of about \$9,000, or six months' imprisonment, for cutting timber on the Ban-nack reservation.

A NUMBER of Italian residents of Vineland, New Jersey, have organized a silk-producing society and hope to make this one of the industries of the State.

THE Ventura Free Press says the oil belt, comprising the ex-Mission ranch, has passed into the hands of the Standard Oil company of Pennsylvania. This is to be regretted.

VICTORIA was not prosperous last year. Its revenue fell short of the estimate by close upon \$1,000,000. A loan of \$20,000,000 is to be raised for railroad construction and public buildings.

IN the vicinity of San Marcos pass, Santa Barbara county, are signs of an extinct volcano. The earth about its crater-like opening is warm, and heated gases hiss and break through its rifted sod.

AMERICANS received at the Paris exposition 750 awards, as follows: Ten grand prizes, 30 diplomas of honor, 134 gold medals, 200 silver medals, 220 bronze medals, and 156 honorable mentions. No other nation did so well.

THE Centinela ranch, nine miles from Los Angeles, has in its orchards 15,000 orange trees (many already bearing), 5,000 almond trees, 8,000 pear trees, besides a large variety of other fruits, olives and bananas, in all 42,000 trees, covering an area of 320 acres.



Ellair.

I.

Slowly we went one moonlit eve
Through the wide garden sweet and pale;
We saw the fragrant locust weave
Its net of shadows pure and frail;
The graceful eucalyptus spires
Caught each fair star's melodious fires,
And, trembling in the wind's control,
Each outlined tree revealed its soul.

We talked of books, and birds and flowers;
At last the dewy night grew chill;
We spoke of absent friends of ours,
Then for a moment we grew still,
To watch the twinkling town and bay,
And the glad lights in long array.
Oh, underneath the moon, how fair
Was thy pure face, serene Ellair!

We had been children side by side
Through many softly flowing years;
What wonder if, that eventide,
We found a little space for tears?
So at the last no word was said,
But quiet hands were clasped instead,
And then a softly closing door
Shut in my world forevermore.

II.

For me the great world loomed before,
With unsealed light and hidden deep;
I could not wait on any shore,
With spurs to win and truth to keep.
I hardly thought the way was long,
I only knew my youth was strong,
I only saw a sunrise vast,
And heard a trumpet's eager blast.

Years passed, I never saw thy face
Except at midnight, in the sky.
In ranks of men I won my place—
To some a foe beyond reply,
To some a friend of royal grace,
To all at times a mystery;
And every song of wave and air,
Took shape with thoughts of thee, Ellair.

I could not think you changed or grew;
Each woman for your sake was pure;
In dreams the childish ways I knew,
In dreams I saw the carved door,
Or heard the music of the rills,
In those memorial hills,
And watched the heavy-laden bee
Search the white-tufted buckeye tree.

III.

At last, when many years were dead,
I thought to find the cottage gate,
Where roses wandered overhead,
And snow-white lilies, with their freight
Of endless fragrance, leaped to greet
My wayward but remembering feet;
There might I see thy face, and there
Should touch thy hands, serene Ellair.

Oh, it was but an empty space,
A weary, hopeless, bitter land.
I could not see you face to face,
I could not touch your gentle hand;
For your white soul had longed to hear
Divinest songs, till earth grew clear,
And, smiling, in a happy place,
You saw the angels face to face
In their celestial sphere.

I found where memory's marble lay,
And hid my mute lips in the grass;
I felt a wave of weeping pass,
As if the world were full of tears, alas!
But tears could not be mine that day.
At last the loving starlight crept
About me as a babe's soft hands,
And, in the falling dew, I wept
With the sad earth, and lonely lands,
And drifting cloud. "O lost Ellair!
If I can find you anywhere,
Or bond, or free, or quick, or dead,
The troubles of the world to bear
Were blossoms on my bended head."

So I went out, where currents cross,
To mingle with the tides of men,
And weave my lonely hours again.
I found a world of toil and pain,
Whose need I measured by my loss,
And better loved my dreaming pen;
But no more brimmed the fragrant wine
Of mirth in any song of mine.

And all day long I hear in dreams
A rustled dress across the sill;
Your name is writ in sunset gleams,
And waves of dusk when winds are still.
I never sink to rest, Ellair,
But that a nameless presence thrills,
A pearly glimmer somehow fills
The outlined shadow of my chair.
And we shall meet, shall meet somewhere,
When this poor soul has grown so strong
That it can climb the spaces long
To thy pure realm of peace, Ellair.

—Charles H. Shinn, in *Argonaut*.

When to Slight Work.

[Written for the RURAL PRESS by a FARMER'S WIFE.]

"Perhaps she has never learned how to slight her work."

So said a dear good woman who was doing all the work of my house with one hand, as it were, and taking care of me and my first baby with the other.

The work which had been a heavy burden to me seemed a mere trifle to her, and as some remark to that effect was made in her hearing, she looked up from the ironing table where the articles of clothing were passing under her hands with marvelous celerity and said with a smile, "Perhaps she has never learned how to slight her work."

Often since have I recalled her words when my own experience has proved to me the neces-

sity of learning such a lesson; and I fancy they contain a useful hint for many an over-worked and disheartened woman.

There is no happier position in life than that of the mistress of the household on a well-ordered farm, where the work is systematically arranged and divided amongst a sufficient number of skillful hands. But alas, this ideal is rarely to be met with. In by far the larger number of American farm-houses there is to be found one woman struggling single-handed with the work that might well occupy the time and energies of three or four, toiling beyond her strength, never dreaming of recreation, depriving herself of necessary rest and sleep and often breaking down under the constant strain. What is she to do? Help she cannot afford to have in the present state of the labor-market, the work lies before her, and there is no one else to do it.

If she should come to me for advice, I should certainly say, "learn how to slight your work when it is necessary." It is very nice to read of a housekeeper whose floor is always white enough to eat off, whose tins are scoured until they reflect your image like a mirror; but there is not the slightest necessity for trying to emulate such a creature of fiction.

Our Heavenly Father does not require of us more than it is possible for us to perform, and when we find that we cannot do all the work that seems to belong to us, it is time to stop and ask what we shall do and what we shall leave undone. Pride must be conquered, even the pride of being a notable housewife; and those things slighted which are in nowise necessary to the health either physical or mental of those dependent upon us.

Take the ironing for instance, a great tax upon a woman if she is not strong from the necessity of standing, and the heated atmosphere in which she works. Certain articles must be done with dainty precision but many others do not require it, and it is simply folly to waste one's time and strength in giving them a polish and a gloss they do not need. Yet many a woman trained to believe that what is worth doing at all, is worth doing well, will toil for hours over common articles of under-clothing, sheets and dish-towels, ironing them as carefully as her handkerchiefs and table napkins. I did so once, but I have learned a wiser way. I can slight them now and make a better use of my time, and I find that we are all quite as healthy and as happy under the new system as we were under the old.

Then the kitchen floor. If the weather is wet and little muddy feet track it all over, let it go. You do not need to "eat your dinner off it," so forget that hackneyed phrase. Above all do not scold. Love is better than spotless boards, and smiling faces and happy hearts should be worth more to a mother than the pride of exaggerated neatness. There are some things you cannot slight, but there is no need to point them out. Every conscientious woman knows what they are. Give your time, your care, your energies to them, and be wise enough to decide where your work can be slighted and brave enough to do it roughly, or to leave it undone altogether if by such seeming neglect you can gain time and strength for other things of greater importance.

Sabbath Morn.

[Written for the RURAL PRESS by JOHN TAYLOR.]

The halo of a summer Sabbath morn is a something which pervades nature, like the aroma of a flower. The aspiring mind grasps at the hidden mysteries, which are felt but not visibly revealed. Silently the soul comes *en rapport* with the voice of nature, giving to the spirit an inspiration for thoughts divine which have an elevating tendency, banishing the cares and troubles of external life, and causing the soul to drink from a fountain ever flowing and full.

How grand these foothills appear at break of day on this autumn Sunday morn! Quietness reigns supreme. Nature and man seem resting and recuperating from active labor. The voices of nature are never silent. The crash of storm and tempest sometimes appall the strongest heart; again, the subdued stillness speaks of peace, creative love and wisdom. How vast God's cathedral appears in the presence of nature in her rugged grandeur. Temples of stone and mortar appear only as the creations of finite workmanship; while the Infinite is represented in every leaf, flower or distant prospect. We may worship reverently in this grandest of temples in the absence of man-made tabernacles, so we may be the better prepared to fulfill life's many requirements at home and abroad. In imagination we list to the music of city church bells. We follow the worshippers to the house of prayer. The melody of song ascends to mingle with spirit voices in the celestial kingdom. We hear the sound of supplication and instruction, and the benediction warming the heart and enlarging the affections. The better are we able to resist temptation and prepared for entering the higher domain of "life eternal."

Again we follow the young, as they meet for instruction in the principles of life and its responsibilities. How inspiring is the echo of their young songs of praise, as it mingles in the universal jubilee for present blessings and opportunities for improvement. 'Tis a sunray illuminating the darkness and ignorance of a

by-gone age, and an earnest of the future peace and glory of our peace-loving land. We love to follow the footsteps of the young, when directed in paths strewn with flowers of love. The heroic age has departed; the sword should now be turned into a plowshare, spears into pruning hooks, and our motto be, "The Fatherhood of God and the brotherhood of man."

Seven days of the week would then constitute a Sunday. The mornings would speak of "love divine," the evenings would crown the labors of the day by songs and supplications from thankful hearts. Fraternal greetings would cheer the desponding and afflicted, banishing from the haunts of men the present feverish desire for the acquisition of that gold which perisheth.

How I love reflection in this quiet solitude, communing with nature and nature's God—the forest songsters the only choir; the grand old rugged mountains the only visible cathedral; the purling brook an anthem full, while, towering stately and grand, stands the old oak tree—

'Tis nature's lesson, wild and free,
As sung this morn I give it thee.

How the Siberian Mammoths were En-trapped.

At the meeting of the British association Mr. Howarth read a paper on the difficulties surrounding the extinction of these huge elephants in Siberia. One of the theories hitherto propounded to account for its sudden disappearance, he said, was that it lived in the central parts of Central Asia, and that the carcasses were floated down the large rivers in that territory to the sites where the remains were now found. The examination of the stomach, however, showed that the mammoth lived on larch or birch trees growing at the verge of woods, near which the remains of the animals were found, and their position showed that they had not wandered far when they were entombed. After looking at the problem from every side, he had come to the conclusion that there had been a sudden and violent change of climate in Siberia, which had frozen the previously soft ground, and had also preserved the mammoth as in a huge meat safe. Although the mammoth had even originally lived in the place where he was now found, it was impossible that he could live there now, owing to the absence in that part of the food which would be necessary to sustain him. Such trees as he used to live on were only now found about 500 miles from the spot where his remains were discovered. The natural corollary that followed from this theory was, that something similar must be postulated with regard to other regions. The conditions in which the elephant was found in Siberia were precisely similar to those in which it was found in the northwestern part of Russian America, and precisely the same as those in the Great lakes, where the mammoth itself was found, and it could not, therefore, be doubted that the mammoth lived in Europe and America with the same food and surroundings as it did in Siberia.

SUPERFLUOUS POPULATION.—Practically, and from our point of view, the country is somewhat over-populated. There is a considerable number of superfluous or redundant laborers in various pursuits. There is no demand for anything we can supply. No one wants our labor, which is what we have to sell. A man would gain nothing now by knowing a dozen trades, because there is nearly the same superfluity or excess of offered labor in all occupations. So the "great law of supply and demand" is being rigorously applied without interference from any source whatever. There are too many of us; but nature is wise; she knows what to do with us, and after a little while there will not be so many. It is like a great war going on all over the land, only there is no enemy, or none that we can see. If those who are being slowly eliminated—thrust beyond the threshold—were gathered together in one place, like the inhabitants of a besieged town, the world would be aroused for their relief. But they are scattered everywhere; each one is alone and they have no comradeship or communication with each other. They have no voice, no cause, or flag, and in the words of Burke, "they will fall, one by one, an unpitied sacrifice, in a contemptible struggle," which will have no memorial or history.—*One of that class in Sunday Afternoon.*

DEATH FROM A TOY.—The London *Lancet* states that a little child at Briton has been killed by accidentally swallowing a squeaking air-bladder. It appears that the toy slipped through the glottis with the bladder downwards, and the quill mouthpiece upwards, so that with every inspiration the bladder became more or less inflated, and thus prevented the entrance of air to the lungs, and produced death by suffocation. A verdict of "accidentally suffocated" was returned by the jury. The case must be unique.

ELEPHANTINE.—Nine feet ten inches at the shoulder was the highest elephant Mr. Sander-son, an expert in such affairs, ever measured. A thoroughbred elephant is worth \$10,000 or more. In 1835 the price of elephants was \$225 a head; now none can be had for less than \$750, and tusk-ers of any pretension are held at from \$4,000 to \$7,500. At 25 years the elephant is full-grown, and it will live from 80 to 120, or even 150 years. The Government load is 1,640 pounds, exclusive of chains and attendants, and the daily ration is 800 pounds of fodder.

Point and Precept.

HEAVEN'S harmony is universal love.—*Comper.*

AMBITION is not a vice of little people.—*Montaigne.*

MAN, while he loves, is never quite depraved.—*Charles Lamb.*

LIFE has always action; it is our own fault if it ever be dull.—*Bulwer Lytton.*

CAUTIOUS age suspects the flattering form, and only credits what experience tells.—*Johnson.*

GOOD is never more effectually performed than when it is produced by slow degrees.—*Du May.*

THE elephant is never won by anger; nor must that man who would reclaim a lion take him by the teeth.—*Dryden.*

EACH departed friend is a magnet that attracts us to the next world, and the old man lives among graves.—*Richter.*

LIFE is a sleep. Old men have slept the longest; they only begin to awaken when it is time to die.—*La Bruyere.*

CATO, the Thessalian, was wont to say that some things may be done unjustly, that many things may be done justly.—*Bacon.*

If we did but know how little some enjoy of the great things that they possess, there would not be much envy in the world.—*Young.*

WITH every one, the expectation of a misfortune constitutes a dreadful punishment. Suffering then assumes the proportions of the unknown, which is the soul's infinite.—*Balzac.*

SCHOLARS may quote Plato in studies, but the hearts of millions shall quote the Bible at their daily toil, and draw strength from its inspiration as the meadows draw it from the brook.—*Conway.*

THE willow which bends to the tempest often escapes better than the oak, which resists it; and so, in great calamities, it sometimes happens that light and frivolous spirits recover their elasticity and presence of mind sooner than those of a loftier character.—*Walter Scott.*

To be ambitious of true honor, of the true glory and perfection of our natures, is the very principle and incentive of virtue; but to be ambitious of titles, of place, of ceremonial respects and civil pagantry, is as vain and little as the things are which we court.—*Sir P. Sydney.*

How often a new affection makes a new man! The sordid, cowering soul turns heroic. The frivolous girl becomes the steadfast martyr of patience and ministration, transfigured by deathless love. The career of bounding impulses turns into an anthem of sacred deeds.—*Chapin.*

If ever household affections and loves are graceful things, they are graceful in the poor. The ties that bind the wealthy and the proud to home may be forged on earth, but those which link the poor man to his humble hearth are of the true metal and bear the stamp of heaven.—*Dickens.*

THE human heart yearns for the beautiful in all ranks of life. The beautiful things that God makes are his gift to all alike. I know there are many of the poor who have fine feeling and a keen sense of the beautiful, which rusts out and dies because they are too hard pressed to procure it any gratification.—*Mrs. Stowe.*

In thy silent wishing, thy voiceless, unuttered prayer, let the desire be not cherished that afflictions may not visit thee; for well has it been said, "Such prayers never seem to have wings." I am willing to be purified through sorrow, and to accept it meekly as a blessing. I see that all the clouds are angels' faces, and their voices speak harmoniously of the everlasting ebime.—*Mrs. L. M. Child.*

WOMEN'S TREATMENT OF WOMEN.—There is a general sentiment that women do not stand by each other, as men do by men; that we are envious, narrow and small, where our sex is concerned; that the greatest obstacles professional women have to overcome are the prejudices of women themselves; that if a woman commits a fault, nobody is so quick and ready to heap opprobrium upon her as another woman. All this is, to a certain extent, unhappily true; but it is by no means generally true. The fashion of women sneering at women is passing into disrepute; so that nowadays, no woman who expects to pass as a well-bred lady, is guilty of the bad taste of speaking disparagingly or slightly of her own sex. Now and then one does it, thinking thereby that she wins the esteem of men by so doing. She can make no greater mistake. Men admire large-mindedness and large-heartedness in women, quite as much as women admire those qualities in men. The more strongly and loyally women stand by one another, the more respectfully they treat and speak of one another, the more women honor women, have faith in women, the better for us, the more credit to us. We cannot expect men to honor and revere us, unless we ourselves honor and revere our own sex.—*Sunday Afternoon.*

LUMINOUS WATCH DIALS.—We read in an exchange that a notable improvement in watches is reported from Chaux de Fonds, Switzerland. By a peculiar process the figures on the dial are rendered luminous, so that if exposed once during the day to the sunlight they remain phosphorescent and visible throughout the night. Preparations are being made for the production of these watches on a large scale.

AN Albany clergyman was recently telling a marvelous story, when his little girl said: "Now, pop, is that really true, or is it just preaching?"

A Pastoral.

Maud Muller worked at raking hay
And cleared her forty cents a day.

Her clothes were coarse, but her health was fine,
And so she worked in the sweet sunshine.

Singing as glad as a bird in May
"Barbary Allen" the live-long day,

She often glanced at the far-off town,
And wondered if eggs were up or down.

And the sweet song died of a strange disease,
Leaving a phantom taste of cheese,

And an appetite and a nameless ache
For soda water and ginger cake.

The Judge rode slowly into view,
Stopped his horse in the shade and threw

His finecut out, while the blushing Maud
Marveled much at the kind he "chawed."

"He was 'dry as a fish,'" he said with a wink,
"And kind-o' thought that a good square drink

"Would brace him up." So the cup was filled
With the crystal wine that the old spring spilled;

And she gave it him with a sun-browned hand.
"Thanks," said the Judge in accents bland,

"A thousand thanks! for a sweeter draught
From a fairer hand," but there he laughed.

And the sweet girl stood in the sun that day,
And raked the Judge instead of hay.

Chaff.

A GRAND shell race—the oyster.
MISCONSTRUCTION—making an old woman young.

BEEFSTEAK and tooth-picks" are now on res-
taurant bills of fare.

WHEN you have a chance to hug the girls,
never complain of wasted opportunities.

AMERICAN whiskey is sixpence "a go" in Lon-
don, but it often goes without the sixpence here.

CYPRUS must be the paradise of islands; it has
only one piano, and the girl doesn't play "The
Sweet By-and-By."

At Jackson, Texas, a base-ball player has been
struck by lightning. He thought it was a "daisy-
cutter" and grve it the short-stop.

KEY weighs 250 pounds. He ought to have
been Secretary of the Treasury. It requires a
ponderous key to lock it from thieves.

KANSAS has a limburger cheese factory, and
a case of yellow fever can't get within ten miles
of the State. The victory is always to the strong.

EIGHT masked robbers stopped a railroad
train in the West the other day. As the train
contained an excursion party of editors, the
only loss was a loss of time to the robbers.

AN English fashion journal, in reply to a cor-
respondent who asks for a "girl's smoking
dress," advises "something snuff-colored,
sleeves en tabatiere, with plenty of piping."

A WAG, who thought to have a joke at the
expense of an Irish provision dealer, said: "Can
you supply me with a yard of pork?" "Pat,"
said the dealer to his assistant, "give this gen-
tleman three pig's feet."

AN amusing circumstance occurred on the ex-
cursion trip to Rochester which was enjoyed
hugely by the spectators. At one of the sta-
tions an elderly, portly lady, amongst others
got on the train, having with her a full grown
boy evidently about eleven years of age. The
mouth of the boy showed a full acquaintance
with tobacco, and other appearances indicated
the precocious Young American. Just prior to
the appearance of Flanagan, the affable con-
ductor, the old lady spoke up and said, "Come
baby, get into my lap." This "baby" did,
cuddling down in true baby style. The object
was quite evident to the amused spectators who,
in a titter, waited to see what Flanagan would do
about it. The conductor looked "baby" pretty
sharply over and then demanded fare of him.
An amusing parley ensued, which finally re-
sulted in Flanagan taking half fare for the
"baby" and beating a retreat, followed by the
laughter of the crowd.

ORIGIN OF HIGH PEWS.—Bishop Burnet com-
plained that the ladies of the Princess Anne's
establishment did not look at him while preach-
ing his "thundering long sermons," as Queen
Mary called them, but were looking at other
objects. He therefore, after much remon-
strance on this impropriety, prevailed on Queen
Anne to order all the pews in St. James's
chapel to be raised so high the fair delinquents
could see nothing but himself when he was in the
pulpit. The Princess laughed at the complaint;
but she complied when Burnet told her the
interests of the church were in danger. The
whim of Bishop Burnet was imitated in many
places which had not been pewed in this
fashion before.

MR. HARBESON only engaged in farming last
spring, and having no experience himself, was
obliged to hire a man to superintend the work.
The other day he read in his paper that "dressed
chickens" brought the highest price in the city
markets, and he showed the paragraph to his
wife, with the remark that "blame if he was
going to the expense of buying dresses for his
chickens, if he never sold them." Mrs. Harbe-
son was a city-bred girl, and knew no more about
farming than the late Horace Greeley, but she
suggested that perhaps she had some old dresses
which she could cut up and convert into polo-
naises and overskirts for their chickens, if there
was much advantage in having them "dressed"
before sending them to market.

Young Folks' Column.

Rain Drops.

Plump little baby-clouds,
Dimpled and soft,
Rock in their air-cradles,
Swinging aloft.

Great snowy mother-clouds,
Brood bosoms white,
Watch o'er the baby-clouds,
Slumbering light.

Tired little baby-clouds,
Dreaming of fears,
Turn in their air-cradles,
Dropping soft tears.

Great brooding mother-clouds,
Watching o'er all,
Let their warm mother tears
Tenderly fall.

—Wide Awake.

How Tim Became a Farmer.

"Shine your boots? Five cents a shine.
Shine your boots?"

Tim had tried his best to get work, but no
one wanted his boots cleaned. He wondered
why it was. When mother was alive, how
often Tim had begged her to let him set up as a
boot-black! "They make lots of money," he
would say. But she always shook her head
and said, "keep on at school as long as you can;
you're too young yet. As long as I'm spared I
don't want you to try it."

But the poor hard-working woman had over-
taxed her strength, taken a fever and died.
Then Tim, left alone in the world, with nothing
but a couple of neat but much mended suits of
clothes and five dollars, resolved to set up as a
boot-black. For a whole week he had tried it.
Some days he got two or three customers, but
now for two days not one person had let him
shine his boots. His five dollars was almost
gone; what should he do? Tim was almost
desperate, and in his desire for a job asked a
lady who was passing if he could shine her
boots. Perhaps she had little boys of her own,
and made it a rule never to pass a poor boy
without a kind word, for their sakes. At any
rate, she stopped and said:

"Not here, my boy; but if you will walk a
ways with me, I'll let you clean them, for they
are very mnddy. Perhaps, though, you will
lose some work by leaving your place?"

"No, indeed; I've not had a chance to-day."
"That's bad," said his new friend, "if you
need the money very much, as I suppose you do.
But you look so neat and nice, I think you have
a good mother."

Tim tried to answer, but his throat swelled,
and tears filled his eyes.

"There! there! Don't fret, dear; here's the
house. Wait at the area, and the cook will let
you in."

Soon a pleasant-faced woman opened the
lower door and told Tim to sit down by the
kitchen fire. The kitchen was full of the odor
of soup, and you know how that will make you
hungry long before dinner-time. Tim, who had
had no soup since his mother had last cooked
their dinner, sniffed the air, and remembered
sadly how good his mother's soup used to taste.
"Mary," called a voice that already sounded
familiar "give the boy a bowl of soup. I can't
come down at once, but here are the shoes; he
can clean them after he has eaten. Put plenty
of bread in his soup, Mary."

"Shure, I was just longing to do it," mut-
tered the girl, hastening to fill a bowl for Tim.
"Here!" she said, "draw up to the table and
eat."

Tim was too hungry to remember his mother's
instructions as to washing his hands, but he did
not forget to bow his head, saying the grace he
had said at every meal since he first began to
speak: "I thank Thee, dear Lord, for this nice
food; and help us to be Thy good children, for
Christ's sake."

Mary stood still in astonishment. "That's
the first grace in this kitchen," she said to her-
self, "but I'm bound it shan't be the last. I've
been a forgetful creature."

The soup finished, Tim polished the shoes;
such nice buttoned boots he had never handled
before. Just as he was giving a last touch to
them, he heard some one come in, and saw the
lady who had brought him standing talking to Mary.

"Thank you; they are very nicely done. But
if you get only one customer a day, you'll not
get on well. Who takes care of you, my boy?
Try to tell me all about yourself. What is
your name?"

"My name's Tim Titus, ma'am. Nobody
takes care of me—nobody but God. Mother
said He'd never forget me. Mother—mother
died—last—"

But he could not tell of that. The lady's
hand was on his shoulder, and she was drying
his tears with her own handkerchief.

"I've tried boot-blacking, but I don't believe I
can get enough to do. Oh! ma'am—" and the
boy again broke down.

He was so neat and clean that Mrs. Denny
drew him close to her, soothing him as every
mother knows how to soothe and comfort. But
her heart was troubled for him. Truth to tell,
she had no money to spare and could do but
little. She had only lately moved to the city,
and had few friends there. What could she do
to help him?

Suddenly Mary, who had been looking on,
full of sympathy, and remembering their coun-

try life and the plenty there, said—

"Send him to the country."
Mrs. Denny's face brightened. "Why, that's
a good idea, Mary. I do believe Mr. Ackerman
would be glad of just such a boy. Would you
drive cows, and learn to milk and help about
the house, Tim?"

"Indeed I would, ma'am, and take my
brushes and black their boots for them."
"Once a week is all they black 'em," said
Mary, with a laugh.

So it was arranged that Tim should come
back in the morning, and Mrs. Denny would give
him a note to the farmer. She offered to pay
his way, but Tim said he had \$2 left and could
buy his own ticket. Mrs. Denny was pleased
with his honesty, and felt sure such a boy would
succeed.

The next day Tim was off for the country.
All his treasures were easily packed in his
mother's old bag, and Mrs. Denny advised him
to leave that at the depot when he reached Far-
rington, and walk out to the farm without it
as, if the farmer kept him, he could easily get
it. Tim found the farm, and hearing voices at
the back door walked round that way and
asked for Mr. Ackerman.

"He's in the barn," said a pleasaut looking
girl. "What do you want?"

"I've a note for him."

"Well, go right over."

Tim delivered his note. The farmer read it
and then, without saying a word, went on with
his work. Tim felt rather discouraged, but,
seeing a pair of boots in one corner, set to work
and polished them. This took some time, for
they had never been polished before, I fancy.
Then Tim put up his brushes and slung his box
on his back; he had better go back or try
somewhere else. The farmer was just going up
to the loft, but as Tim slung his box, he said:

"Come here, my boy. You can work; I see
that. Are you willing to work for a home?"

"Yes, indeed, sir."

"Got any clothes?"

"Two suits, sir."

"Any money?"

"One dollar and fifty cents."

"How much time do you expect to have to
fool around?"

"Can't tell till I try to do the work."

"The farmer was pleased with the bright,
truthful face, and said:

"You'll do. Go in the house and tell 'em to
set you to work—chop wood, draw water, do
anything till milking time."

So that was how Tim's boot-blackening ended.
He lives on the farm still, but he is taller than
I am. Mrs. Denny comes out to see her old
friends sometimes, and is always as glad to see
him as any of the rest; and, next to God, Tim
loves the lady who let him shine her boots.—
Hope Ledyard.

GOOD HEALTH.

How the Body is Built Up.

The muscle and fat of the body, remarks the
Journal of Chemistry, are derived from the
food, and animal heat is evolved from their
combustion or their combination with the
oxygen admitted by the lungs. When the mus-
cles are inactive, slow combustion goes on; and
for every grain of carbon burned, a perfectly
definite amount of heat is produced. When the
muscles contract, the combustion is quickened,
and the additional heat is liberated in the mus-
cles themselves. If external work be done, as
in lifting a weight or hammering a nail, the heat
is no longer developed in the body, but trans-
ferred to the weight lifted or the raised ham-
mer, and is liberated when they fall, and the
heat thus liberated is exactly equal to the com-
bustion inside the body. Thus the body is an
apparatus efficient beyond all others in trans-
forming and distributing the energy with which
it is supplied, but it possesses no creative power.
A man weighing 150 pounds, by the consump-
tion of a single grain of carbon can lift his body
to a height of eight feet, and by the consump-
tion of two ounces, four drachms, twenty
grains, to a height of ten thousand feet. Mayer
maintains, against Liebig and others, that the
muscles in the main play the part of machinery,
converting fat into the motive power of the
organism. He saw that neither nerves nor
brain possessed the energy necessary to animal
motion, and believed they held fast or let loose
muscular energy as an engineer, by the motion
of his finger in opening or closing a valve,
liberates and controls the mechanical energy of
a steam-engine. These views are now quite
generally accepted by scientific men.

TURPENTINE VAPOR IN ACCIDENTS FROM
CHLOROFORM VAPOR.—Dr. Wachsmuth, of Ber-
lin, has suggested a preventive of those acci-
dents which frequently occur in the administra-
tion of chloroform to produce anesthesia. He
says: It consists in the addition of one part of
rectified oil of turpentine to five parts of chloro-
form. The oil of turpentine in vapor appears to
exert a stimulating or life-giving effect on the
lungs, and protects these organs from passing
into that paralyzed state which seems to be pro-
duced by chloroform narcosis. Dr. Wachsmuth,
while lying on a sick bed, accidentally breathed
the vapor of turpentine, and he experienced
from this a strongly refreshing feeling. This
fact induced him to try the plan of adding oil of
turpentine to chloroform when the latter was
used for anesthetic purposes. The beneficial
results surpassed his expectation.

DOMESTIC ECONOMY.

Honey in the Kitchen.

Many of the problems which vex our honey
producers would be solved if people would look
upon honey as a staple and not as a luxury.
Perhaps a few recipes in which honey is an in-
gredient will lead some to experimenting with
honey in their kitchen chemistry:

Honey Lemon Cake.—One cup butter, two
cups honey, four eggs well beaten, teaspoonful
soda, teaspoonful essence of lemon, half cup
sour milk, flour enough to make it stiff as can be
stirred, bake at once in a quick oven.

Honey Apple Cakes.—Soak three cups of dried
apples over night; chop slightly, and simmer in
two coffee cups of honey for two hours, then add
one and one-half coffee cups of sugar, one coffee
cup of melted butter, three eggs, two teaspoonfuls
saleratus; cloves, cinnamon, powdered lemon or
orange peel, and ginger syrup, if you have it.
Mix all together, add the apples, and then flour
enough for a stiff batter. Bake in a slow oven.
This will make two good sized cakes.

Honey Fruit Cake.—Four eggs, five cups of
flour, two cups of honey, one teacupful of but-
ter, one cup of sweet milk, two teaspoonfuls
cream of tartar, one teaspoonful soda, one
pound of raisins, one pound of currants, one-
half pound citron, one teaspoonful each of cloves,
cinnamon and nutmeg; bake in a large loaf in a
slow oven. This will be nice months after bak-
ing as well as when fresh.

Honey Sponge Cake.—One large coffee cup of
honey, one cup of flour, five eggs. Beat yolks
and honey together, beat the whites to a froth;
mix all together, stirring as little as possible;
flavor with lemon juice or extract.

Railroad Honey Cake.—One cup of honey, one
heaping cup of flour, one teaspoonful cream
tartar, one-half teaspoonful soda, three eggs and
a little lemon juice; stir all together ten min-
utes. Bake twenty minutes in a quick oven.

Honey Cake.—One quart of extracted honey,
one-half pint sugar, one-half pint melted butter,
one teaspoonful soda, dissolved in one-half tea-
cup of warm water, one-half of a nutmeg and
one teaspoonful of ginger. Mix these ingredients
and then work in flour and roll. Cut in thin
cakes and bake on buttered tins in a quick oven.

Germantown Honey Cake.—Three and one-half
pounds of flour, one and one-half pounds of
honey, one-half pound of sugar, one-half pound
of butter, one-half of a grated nutmeg, one-sixth
of an ounce of ginger, one-fourth of an ounce of
soda; roll thin, cut in small cakes and bake in a
hot oven.

Cheap Honey Tea Cake.—One teacup of extract-
ed honey, one-half teacup of thick sour milk or
sour cream, two eggs, one-half teacup of butter,
two cups flour, scant one-half teaspoon of soda,
one teaspoon of cream of tartar; flavor to taste.

Honey Ginger Cake.—Three cups of flour,
one and one-half cups butter; rub well together
then add one cup brown sugar, two large table-
spoonfuls of ginger, and if you like, the same
amount of caraway seeds; five eggs, two cups of
extracted honey and three teaspoonfuls of bak-
ing powder. Beat it well, and bake in a square
iron pan one hour or more.

On Tomatoes.

Scalloped tomatoes are commended to those
who like their tomatoes thickened. The fruit
being peeled and sliced, is laid in a pudding
dish, with alternate layers of cracker or bread
crumbs, distributing salt and pepper and bits
of butter on each layer and finish with crumbs.
Bake half an hour and serve in the same dish.
If the tomatoes are very juicy, bake with the
dish open, otherwise cover and when partly
done remove the cover and brown the top.

Broiled Tomatoes.—Good sized, solid toma-
toes are cut in halves, crosswise, placed on a
gridiron or broiler, and put over a brisk fire,
cut surface down. In eight or ten minutes, ac-
cording to size, turn, put upon each half salt,
pepper, and a lump of butter, and cook with
the skin side down, rather more slowly than
before, about as long, or until done. An excel-
lent breakfast dish.

Tomato Toast.—Stew tomatoes until done,
seasoning with butter and salt; add milk to
make sufficiently thin, or cream, when the but-
ter may be omitted, and use this upon slices of
well toasted bread, instead of the usual sauce
made for dip or cream toast. Said to be a fine
breakfast dish.

Tomato Omelette.—For an omelette of six
eggs, use four medium sized tomatoes or fewer
if large; peel, cut out all hard or partly ripe
parts, and chop fine. Rub two tablespoonfuls
of flour into one tablespoonful of butter; mix
with the tomatoes and add salt with pepper, if
desired; stir the beaten eggs into this and cook
as for other omelettes. Unless the tomatoes
are thoroughly ripe, cook them slightly at first.

RECIPES FOR MAKING CANDLES.—EDITORS
PRESS:—Will you be kind enough to give a
recipe for making mold candles, also for dipped
ones, and oblige a SUBSCRIBER, Borden, Cal.

Will our readers furnish practical instruc-
tions on these points?—EDS. PRESS.

INDIAN-MEAL PORRIDGE.—Boil one quart of
soft water and mix half a pound of meal in a
little cold water and boil for 15 minutes, stir-
ring occasionally. Pour it into basins and let
it stand for 10 minutes.



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SAN FRANCISCO:

Saturday, October 19, 1878.

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The Week.

As we feared last week, the rain signs were true, and the first heavy storm of the season has done its work, recording a little more than one and one-quarter inches of water in this city, and greater and less amounts elsewhere. The morning after the rains we sunk a few shafts in barley stubble in the lower part of Alameda county, and found the ground wet to a depth of 3½ and 4 inches, on moderately high ground. This rain will be enough to destroy the old and start the new feed in many parts, and the anxious inquiry will be whether the next downfall will come soon enough to maintain the growth.

It would have been better had the clouds restrained their gifts for a few weeks. Dry feed was abundant, and while the stock was turning it to account there would have been time to finish the threshing, of which not a little is still undone in many regions. Now the question is, what to do with the wet stacks, and whether the air will be dry enough to dry out the grain which will be pitched about in hope to fit it for the thresher. Doubtless considerable loss will be occasioned in several crops which are not yet fully gathered in. And yet October has only brought its accustomed visitation. More than half the time there has been a heavy storm in this month since records have been kept. Anticipations of a dry year are freely banded about, but this is but a borrowing of trouble. We see no reason to expect it from present occurrences.

Selection of Seed.

Nearly every year everyone who writes upon agricultural subjects has something to say upon the great advantages to be derived from proper choice of seed. Though the subject is an old one and we do not expect to bring forward anything especially new in discussing it, it is nevertheless of immense importance, because there are still thousands of seed sowers and planters who are careless of what they put in the ground and are correspondingly chagrined if the outcome is not as desirable as they could wish. Seed sowing is with many of us a matter of pure faith; faith which is indeed the substance of things hoped for; and, when we carelessly sow alfalfa full of dodder and cereals full of cheat and foul weeds, our faith gives way at last as we receive the evidence of things unseen at planting time.

We have spoken often of the simple method of improving growths by year after year choosing the best that grows as seed for the next crop. Thus many of our choicest varieties of grains and vegetables have been bred up to their present high standing. The agricultural literature of the day is full of instances of this simple and practical method of improvement, and the yearly occurrences in almost every farming neighborhood in this and other States, include the announcements of new and valuable qualities developed by wide-awake and thoughtful growers. These cases of improvement by selection are then so common that we need not cite them; and yet at the same time we often notice the refuse of the season's crop shipped back to the ranches for seed.

There has been during the past year unusual interest manifested in searching out the records of the different varieties of wheat which are grown. The prevalence of the rust has revived the old inquiry as to whether there is a rust-proof wheat. Several such wheats are confidently announced by growers in different parts of the State, because certain varieties which they have had have withstood the attacks of the fungus which have ruined other varieties. This inquiry is a commendable one and we hope such a wheat may be found. It must, however, be borne in mind that such a grain to be of wide value in this State must be a white wheat. However valuable a red wheat may be for local grinding, it will not do for the shippers to England. They must have a white wheat to mix with the red wheats which England gains in full supply from the Atlantic ports. It may be that all wheat in growing here tends toward whiteness; but to get the best results from sales of immediate growths the grain must be as white as possible.

There has naturally been much interest manifested in Chevalier barley because of the extra price which fine samples of this well-bred variety command. It must be remembered that the production of the best Chevalier is linked to a certain extent with favorable local conditions. It is the opinion of the buyers that the southern part of Alameda county is better adapted to the production of fine Chevalier than any other region of the State. Whether this is true or not experiment alone can determine. It is reported that excellent samples have been grown this year in some of the southern counties, and the trial should be made in all parts where a good bright article of brewing barley can be produced. It would be well, however, to bear in mind that there are points on the growth of this grain in different localities which must yet be demonstrated and trials should be at first on an experimental scale.

In the selection of seed potatoes to escape the blight there is still room for much experimental knowledge. Several things seem to have been ascertained and one is that good results follow the introduction of seed from abroad and a change from the varieties which have been grown year after year on the ground. An occasional contributor to the Press, Mr. E. H. Cheney of Bodega, has lately written to a country paper, the *Petaluma Argus*, an account of his experience and observation on the choice of seed potatoes. He says: "It has been, and is at present the custom among large potato raisers, to let their potatoes remain out in the field a long time after being dug, exposed to the action of the sun and wind until their color becomes changed. The rains come before they are removed from the field, and often the sacks become rotten before they are moved. Sometimes they are hauled and dumped into huge

piles imperfectly secured against the action of the dews, wind and rain. There they remain through the winter in this unnatural state; they prematurely sprout and grow, and by the time that the season of planting again commences, they are one clotted mass, their character changed, vitality impaired and in a decaying state. From this unsightly pile the seed is selected for another crop. Can good, sound and healthy tubers be expected from such seed? For two years I experimented in new and old land with the same result, and every year I am more strengthened in the conviction that our only safeguard against blight and other diseases of the potato is in frequently changing the seed and a better care in storing our potatoes for seed." Concerning some other conclusions which Mr. Cheney has reached respecting the potato disease in this State, we shall take occasion to speak hereafter.

We can but repeat former advice which we have given concerning the testing of small samples of all vegetable seed which it is proposed to sow. In the growth of vegetables generally considerable labor is expended in preparing the soil and great loss is occasioned by trusting to poor seed. Recent experiments show that from one-quarter to one-third of purchased garden seeds do not germinate, and everyone should test the germinating power of the special lots he proposes to sow so as to make proper allowance for failure to germination. Count a certain number of seeds, place them in a warm place between layers of moist cotton and ascertain the percentage of sprouts you obtain.

QUERIES AND REPLIES.

Hogs in Alfalfa—Creamery.

EDITORS PRESS:—Will you inform me if hogs root up alfalfa in the field? What is meant by creamery butter? What is a "creamery"?—H. R. WEST, Campo Seco, Calaveras Co., Cal.

We believe it is the general experience that hogs do not as a rule root up an alfalfa field when the plant is in good growth. They are content then to eat the plant, but in winter they will root up and eat the alfalfa roots.

"Creamery butter" as known in the Eastern market is butter made in a creamery. It is the finest butter which is produced in large quantities, and "creamery fails" lead the quotation lists. The term "creamery" was first applied to those establishments in New York State which produced both cheese and butter. The cream is removed from part of the milk, and, owing to perfect care of the milk and intelligent churning and manipulation of the butter, the product became uniformly of high excellence and soon established its name in the markets. There were at first three terms applicable to the large co-operative dairy establishments at the East: the "cheese factory," where, as a rule, the "whole milk" was made into cheese; the "creamery," where butter and "skim milk cheese" were made, and the "butter factory," where all the cream was removed, made into butter and the "blue Jack" or fully skimmed milk was fed to hogs. We believe now the last two terms have "pooled their issues" and "creamery butter" is applied generally to the product from the large and excellent establishments between which there was formerly a distinction in name and practice. This result was probably hastened because the name "butter factory" fell into disrepute through a system of collecting butter from all sources and working it over, coloring it uniformly and otherwise "doctoring" it. This system was introduced in the Western States, and the result was such that "factory butter" became poor in fact and in name.

Bitter Almonds.

EDITORS PRESS:—I see in the RURAL some talk about almonds. I have in my orchard a tree about a foot in diameter, growing vigorously and loaded heavily this year with bitter almonds. I know of no use for them. The ground is literally covered where they have fallen. Please let me know what they are good for and what to do with them.—E. N. CLARK, Red Bluff, Tehama Co.

Bitter almonds have various uses abroad, but here they are only called for by confectioners, and small calls at that. Messrs. Spear, Meade & Co., of Washington street, inform us that they occasionally make a sale of a small lot of kernels (removed from the shell) at about 20 cents a pound. Even at this small price, the trade cannot be forced, but a sale only can be

made when some confectioner comes for them.

Abroad there is a much better demand for the bitter nuts, for we find in London quotations, latest received, that "Barbary bitter almonds" sell at 77s 6d@80s, or about \$15.50@ \$16 per cwt, while "Barbary sweet almonds" sell at \$16@16.50 per cwt. These prices we think are for the nuts, shells and kernels included. If any one has a point more on turning bitter almonds to good account, let us have it.

Poultry Points.

EDITORS PRESS:—Can one man unassisted, properly attend to 1,000 fowls? Can I with safety and profit transport eggs to San Francisco, a distance of 15 miles by wagon and 50 miles by rail?—R. C., San Francisco.

Mr. Threlfall of Washington Corners, a large poultry keeper, assures us that one man can care for 1,000 fowls if he has proper conveniences. Everything depends upon the conveniences for preparing and dealing out food, and having water distributed in pipes so that it would not have to be hauled to the different points. If a man has facilities and ingenuity to arrange his appliances he can run 1,000 fowls successfully.

Eggs can be carried the distance named with a profit, provided they do not cost too much to start with. The eggs should be packed in the boxes usually used for shipping and carried on a spring wagon. It would be best to ship only once a week as a rule, and then a man could get his work ahead so that the fowls would take care of themselves during his absence. If our querist is successful in other points he need not fear trouble on the questions he asks.

Climbing Buckwheat.

Mr. James Smith of Ferndale, Humboldt Co., recently left at our office a peavine embraced by a climbing weed which must interfere more or less with the growth of the crop. He thought it might be dodder which is so widespread in alfalfa fields. It was clearly not dodder, and Prof. Hilgard recognizes the pest as "climbing buckwheat" (*Polygonum Scandens*). It is a foul weed and has been a source of much trouble in the cotton and corn fields of the South. The seed should be cleanly separated from the peas and the vines should be gathered and burned just before the seed is ready to fall. The seed falls readily from the plant as soon as it dries, and from the sample which we have we infer that the weed seed ripens a little earlier than the peas. This complicates the matter because much of the seed will fall to the ground before the peavines are ready to pull. Much will be gained, however, by removing the vines from the field or burning as soon as the peas are threshed out.

Cutting Bermuda Grass.

EDITORS PRESS:—Your Santa Monica correspondent asks: "If it is possible to cut Bermuda or Sandwich Island grass with a lawn mower." I can assure him that a lawn mower will be entirely ineffectual, as I find in running one over the grass that it clips only here and there a stalk, and merely serves to pack the grass in a closer mat. Cutting with a scythe won't answer, as you cannot rake over it, and the dead grass remaining ruins the appearance of your lawn. It occurs to me that the only way to trim it, to preserve a neat appearance, would be with sheep shears. If this grass shall prove as I have been informed—so sensitive to cold as to turn brown at the least touch of frost—it is not worth the pains required to keep it in lawn.—E. C. H., San Francisco.

EDITORS PRESS:—In reply to your querist in regard to the effectiveness of a lawn mower on Bermuda grass, I will say that I am managing several lawns of this grass. I use a "Charter Oak" lawn mower, which is the best in use, and cuts the grass well. The cost of this mower is \$20, and with ordinary care will last a lifetime.—A. KAMP, San Jose.

"In a multitude of counsels there is wisdom."

Spotted Beet Leaves—Dodder as Stock Feed.

EDITORS PRESS:—If Mr. Berwick will examine his beet leaves closely I think he will find a small yellowish spot containing a small grub or maggot, or something of the sort. Rusty leaves I have had sometimes, but none this year as yet.

As regards my experience with dodder in alfalfa, I have found heavy stocking at this time of the year very effective. The cattle like the dodder, and I have not a tenth of what I had of it in my alfalfa two years ago.—ROBERT ASHBURNER, Baden Station, San Mateo Co.

ON FILE.—"Apiary," R. W. K.; Santa Clara Notes, A. C. K.; "Santa Barbara Co.," B. W. C.; "Glimpses by the Wayside," M. S.; "Floriculture," W. C. L. D.; "Reflections of a Poor Farmer," S.; "Agriculture in England," J. P. S.

THE State Capitol park at Sacramento, is being artistically improved.

Artesian Wells.—No. 1.

No one need be told that the subject of artesian wells is at present an interesting one. An artesian fever is spreading over the entire coast. We believe it started with San Francisco trying to reduce her expenses. It has spread throughout California. Some citizens of Winnemucca, Nevada, have clubbed together to pay the expenses of a trial well, which, if successful, will, to use the expression which is epidemic with the artesian fever and spreads wherever it does, "make the desert blossom as the rose," whereupon the citizens of Winnemucca will avail themselves of the Desert Land act. Arizona has caught the fever. Montana is just getting it and her Press is beginning exhortation to artesian efforts. And so it goes. Thus it happens that everyone is alert to any item or article connected with the subject of artesian wells. People are asking how to bore wells, how much it will cost, how much water they can get, and what kind of water if they get it.

For reason we will follow a very unscientific course. We will take up first the wells of San Francisco, which will occupy the first and second articles and perhaps more. Then we shall consider wells in other parts of this State and in other States. Then we shall consider the subject of artesian wells more generally, giving, if possible, cuts of the tools used, outlines of methods, and information in regard to estimating costs, etc.

There have, perhaps, been bored in San Francisco upwards of 1,500 artesian wells. We know of only about 90. Of some of these we have none of the data and of very few are there clear and full accounts either of depths or of strata passed through. As an illustration of the difficulty met with in finding out the real depths of the wells, it may be stated that the well on the Plaza, No. 51, on Figs. 1 and 2, was reported first at 400 feet. A well-borer finally changed this to the neighborhood of 230; still another well-borer altered the figure again to 93, which, on examining the profiles, turns out to be the most probable depth. Where depth is so freely dealt with, it might be expected that strata passed through would be carelessly recorded. That this is the case will appear when we present our data, which we will give in full just as we got them rather than attempt at present to reduce them to system.

Our data have been furnished us principally by Mr. Patrick Delaney, of 764½ Howard street, San Francisco. Mr. Delaney is a pioneer well-borer and has had great experience with San Francisco artesian wells. Very complete and intelligible information has been gained from Messrs. Stevens and Wilder, of Folsom and Eleventh streets, San Francisco. We shall have occasion to speak further of our informants.

In several of the wells wood and leaves have been struck. In others gold has been met with, both in quartz, gravel, and in black sand, though hardly in sufficient quantities to warrant the fear that deep placer mining at San Francisco will detract in any great measure from the ocean beach excitement. Some of the wells have been affected by the tides. Some wells close to each other have affected each other's supply. Others, grouped even more nearly together, have seemed to be entirely independent as to water resource. Brackish water has been found in some wells; in some very hard water; in others good soft water. These and other exceedingly interesting and instructive facts will appear as we study the wells. Figure 1 is a map of the principal part of San Francisco, showing the old land line, and in a general way the locations of about 70 wells. Choosing lines passing through or near the greatest number of widely separated wells, and forming as nearly as possible a rectangle, as shown on the map, we have drawn profiles of the city on these lines showing the depths of the wells. These profiles show a degree of conformity in the water strata to the surface, which would go to show a less broken condition of strata than is indicated by the outcroppings on the hills and by the well-borers' expression, that the "veins of water are like the veins in a man's arm;" however, when the imperfections of the data are seen, and other things are considered, it will appear that there is little to justify joining the bottoms of the wells, as has been done in the profile maps, Figs. 1 and 3. On the profiles the horizontal scale is to the vertical as 1-50: 3.

Hence the great distortion.

Now for the wells:

No. 1; 140 feet deep. No further data.
No. 2; 13-inch well; 194 feet; struck rock at 160 feet; got through it; quit without rock.
No. 3; 184 feet; sand down to 50 feet. Got no water until went 175 feet; got into sand and

No. 7; 84 feet. Struck blue clay at that depth and quit. No water. A well 160 feet deep had been bored here before. The unnumbered well immediately north of No. 7 struck blue clay and no water at the same depth, 84 feet.
No. 8; 103 feet deep. No further data ex-

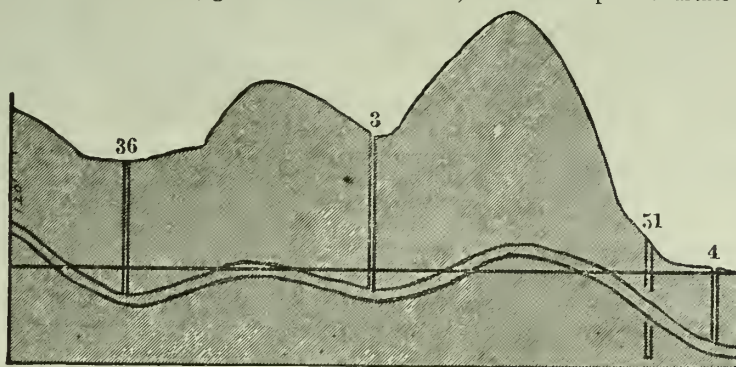


FIG. 1. PROFILE FROM EDDY AND DEVISADERO TO JACKSON AND SANSOME

gravel, and then water came up to within 20 feet of the top.

No. 4; 89 feet. Filling, 40 feet; black mud, 10; sand and clay, 9; stiff yellow clay, 12; water, sand and gravel, 13; hard clay, 3; bed rock, 2.

No. 5; 201 feet. Blue clay, 40; then hard,

cept that the well furnished a good supply of water. This well furnished black sand, at first thought to be gold-bearing, and some little placer mining was done at the dump. The most interesting fact connected with it is that while it struck water, well No. 37 not 300 feet away went down 212 feet in vain.



FIG. 2. ARTESIAN WELLS IN SAN FRANCISCO.

black sand without water; at 108 feet struck black rock.

Less than a block from No. 5 is another well, the data of which are: 133 feet deep to the rock; yellow clay, 30 feet.

No. 6; 181½ feet; 40 feet of bay mud, 15 of

No. 9; 84 feet deep. Sand, 30; then clay, 10. The borer's comment is: "I will defy the world for better water."

No. 10; 168 feet. Clay, 40; hard sand, 30; then hard sand to the water. The unnumbered well across the street is only 116 feet deep,

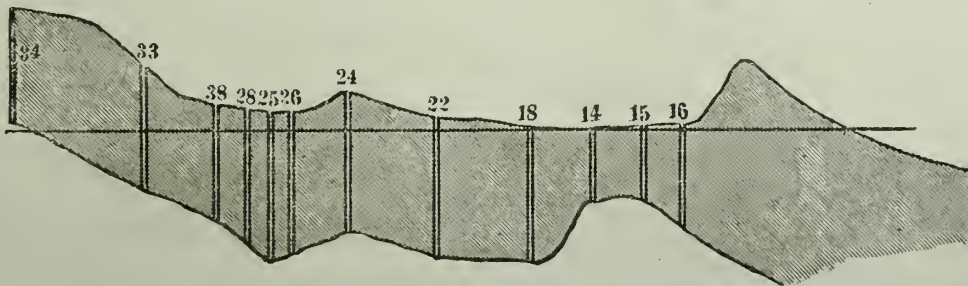


FIG. 3. PROFILE FROM NOE AND MARKET TO FIRST AND BRANNAN.

black sand, then got into yellow clay and gravel, then hard dry sand without water, then into yellow clay and small rock, then on the rock at 181½ feet. We believe that this well did not get good artesian water, but after reaching the above depth was cemented up so as to supply surface water.

flowing. At 100 feet struck white, hard sand. No. 11. This well, between No. 10 and No. 12, went 174 feet. Sand and clay, 90; then water all the way down; at 111 feet struck a flow that came 8 feet over the surface.

No. 12. Two wells at about equal distances west and east respectively of this number give

the following data: West, 201 feet to the rock, quicksand down to 90 feet; blue clay from that down. East, 110 feet deep; 30 feet of sand to the water. This well yielded to the pump 75,000 gallons per day. When this amount was pumped out a well about one block to the east ceased flowing except at night, when the pumping at the former was stopped.

No. 13; 84 feet deep; sand, 30; from that down flowing well; water raised 6 feet above the surface. Across the street from this another well gave the same data. On the same block east there were two more flowing well.

No. 14; 74 feet; blue mud, 40; flowing well. A short distance east of No. 14 a well flowing 8 feet over the surface gave the following data: Depth, 140 feet; filling, 10; blue mud, 40.

No. 15; 75 feet; blue mud, 75; flowed when bored. Another well on the same block went 140 feet, the first 40 being blue mud.

No. 16; 112 feet; good water.

The unnumbered well beyond the old land line, on Third street, was bored originally 175 feet. Water then raised to the surface, but only 600 gallons per day. This supply being insufficient, a diamond drill was put on and the well bored to a depth of 675 feet, but no more water was obtained. At well No. 39, about the same thing was done. The circumstances were, we believe, something as follows: Water was obtained at the ordinary depth for this neighborhood, when an injudicious use of giant powder injured the well and necessitated the use of the diamond drill. The well went to a depth of 560 feet, and, we think, found water.

No. 17; 140 feet; sand, 50 feet; at 130 feet struck a bed of acorns and leaves.

No. 18; 142 feet; blue clay, 40 feet; flowing well.

No. 19; 130 feet; quicksand, 40; blue clay, 35; water from that down; flowing well. About half a block northeast of this another well gives: depth, 180 feet; quicksand, 20; blue clay, 20; rock at 150 feet. A block southwest of No. 19 is another well, No. 41, 120 feet deep, with water within 8 feet of the surface. Well No. 50, in the same neighborhood, is 124 feet deep.

No. 21; 78 feet deep; flowing when bored. A curious fact is noticeable here. Well No. 22 is only one block from 21, yet its data, which are most complete, give no account of water above a depth of 132 feet.

No. 22; bore, 8 inches; depth, 144 feet. This well supplies quite a number of dwellings with clear, sweet, cold water. Sand, 28; blue clay, 8; cement and clay mixed, 6; light gray sand, 4; streaks of sand and clay, 7; solid blue clay, 4; fine yellow sand, 5; thin layers of clay, sand and cement, alternating, 18; yellow sand, 8; gray hard pan, 7; marl, black and yellow sand, mixed, 16; black clay, 3; black sand containing gold, 3; blue clay, 1; soft sandstone and yellow gravel, 4; washed gravel and gray sand, with fine stream of water, 12. The difference of level between the surface at 21 and at 22 is only 5 feet, 21 being the higher. This would indicate defects in the notes, great tilting of strata or else furnishes foundation for the underground river theory.

No. 23; 140 feet; quicksand, 60 feet.

No. 24; bore, 7 inches; depth, 144 feet. The water is pure, cold and sweet, rises within three feet of the surface, and cannot be lowered by pumping. It supplies fifteen families and a Chinese washhouse, besides water for sprinkling in front of the premises. Sand, 24 feet; yellow clay, 16 feet; soft sandstone, 6 feet; gravel and sand, 18 feet.

This neighborhood is peculiarly interesting. Less than 200 feet northeast of No. 24, is a flowing well, 150 feet deep. About thirty feet east of this last named is another, 240 feet deep, which gives 80,000 gallons per day, supplying a tannery. About 30 feet east again of this one, is still another, giving it is said about the same supply, but only 160 feet deep. Southwest of this about 100 feet, is yet another, 150 feet deep, the water rising to the surface and refusing to be lowered. About 250 feet north of Eleventh street, on Folsom, is another, 155 feet deep. None of these wells affect the others. At Ninth and Folsom, about two blocks north of the last named well, is a well 176 feet deep.

In our next we will continue this catalogue of wells, give some more profiles, and some general conclusions from the study of the wells.

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CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

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A. J. TWOGOOD, Riverside, Cal., Importer and Breeder of Pure Bred Poland-China Hogs.

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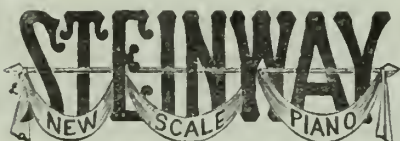
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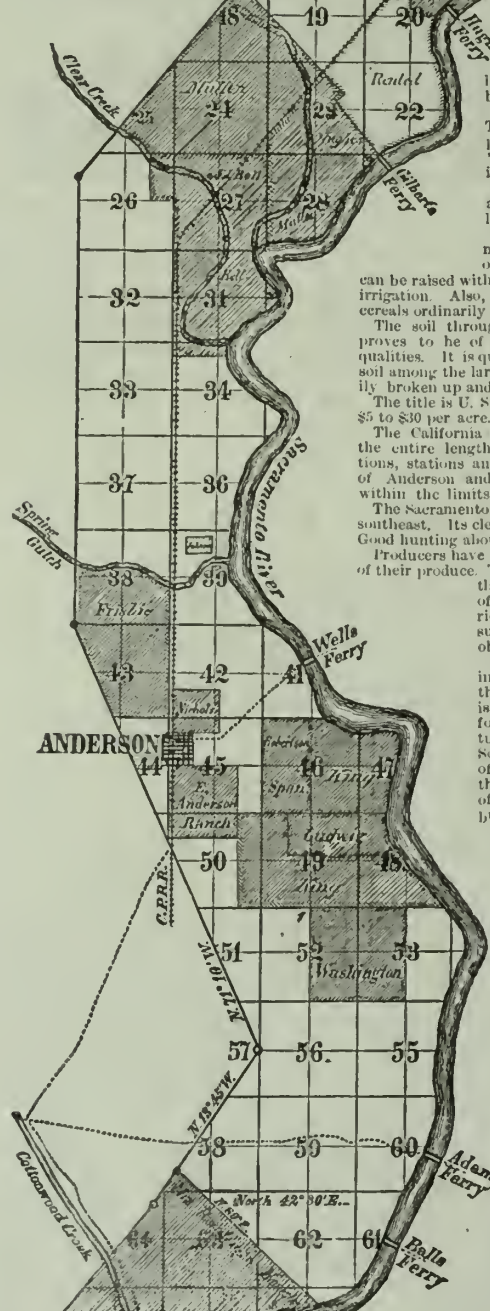
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The Reading Ranch, in the Upper Sacramento valley, originally embracing over 26,000 acres of choice grain, orchard and pasture land, is now offered for sale at low prices and on favorable terms of payment, in subdivisions to suit purchasers.

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The average rainfall is about 30 inches per annum, and crops have never been known to fail from drought.

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The soil throughout the tilled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

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The California and Oregon railroad traverses nearly the entire length of the tract. There are several sections, stations and switches, besides depots at the towns of Anderson and Reading, all of which are located within the limits of the ranch.

The Sacramento River borders the whole tract on the southwest. Its clear waters are well stocked with fish. Good hunting abounds in the surrounding country.

Producers have a local market, which enhances the value of their produce. The railroad transportation route is level throughout to San Francisco. A portion of the land is auriferous and located near rich mines now being worked. Land suitable for settlers in colonies can be obtained on good terms.

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Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor.

EDWARD FRISBIE,

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P. S.—Send postage stamp for illustrated paper containing information about Shasta county and these lands, and say advertised in this paper.

Location of Shasta County.

Shasta County lies not far from midway between the two most important ports on the Pacific shore, i. e., San Francisco and Portland, Oregon, and directly on the overland route, which in the future will become the grand thoroughfare from Mexico to British Columbia. The town of Reading, at present, and probably for years to come, the head of railroad transportation on the California side of the mountains intervening below Oregon, is distant from San Francisco by railroad (via Vallejo) 255 miles; from Sacramento City, 169 miles; from Marysville, 117 miles.

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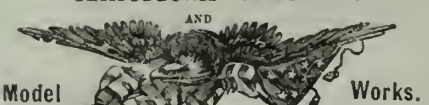
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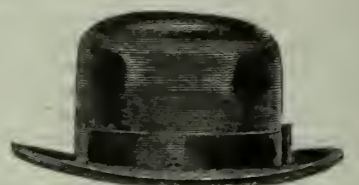
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1st.—It holds the bed clothes firmly to the footboard without injuring them in any way. 2d.—If the covering is short, the clamps will hold them in place, when nothing else will. 3d.—Clothing can be adjusted when clamped at the foot as well in the dark as in the light. 4th.—For cribs and children's beds, it has no equal. 5th.—A woman can change clothing and make up three beds quicker and easier than she can make one without it. 6th.—When sheets are not to be changed, the clothes can be adjusted in two minutes. 7th.—Spreading on bedding with footboard turned down is as convenient as laying cloth on a table. 8th.—It hides all inequalities and leaves the bed covering much smoother than it can be made by tucking under. 9th.—The bedding can be thrown back over chairs to ventilate without opening the clamps, and adjusted again as easily as closing a book. 10th.—Turn down the footboard and the bedding can be removed in a body or separately much easier than from other beds.

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Henrietta, Berries 3/4 inches around. Twenty other varieties for fall planting. Blackberries, Currants, Grapes, etc. Circulars free. G. H. & J. H. HALE, South Glastonbury, Conn.

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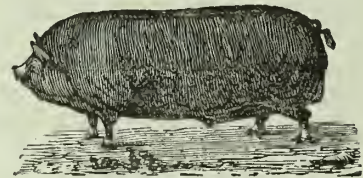
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My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

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Thoroughbred Berkshire and Poland China Swine, Light Brahma and Black Cochins. Chickens for sale.

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116 Acres

Unlimited Range.

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Largest Yards

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on the Coast.

Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.

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ALBERT MONTPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce.

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

Dewey & Co. { 202 } Patent Ag'ts.
Sausome St.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING OCTOBER 1ST, 1878.

AMALGAMATORS.—Charles P. Bowen, Silver City, Idaho Ter.
HOPPERS FOR CUBE SUGAR MACHINES.—Wm. Jasper and Stephen Boushey, San Francisco.
MACHINERY FOR MAKING CUBE SUGAR MACHINES.—William Jasper, San Francisco.
LASTS.—Joseph E. Chenette, Hillsborough, Ogn.
APPARATUS FOR SAVING FLOAT GOLD.—Julius J. Muller, San Francisco.
LIFE BOATS.—Charles Dickenson, Portland, Ogn.
SECTION PIPES FOR PUMPS.—Eric O. Leermo, Gold Hill, Nev.
PENCIL CLASPS.—Wm. A. Scollay, San Francisco.
MEDICINAL PREPARATIONS.—Trademark—Matthew Palen, San Bernardino, Cal.
MEDICINAL PREPARATIONS.—Trademark—Channing White, San Francisco.
COCON SYRUP.—Trademark—Williams & Moore, Stockton, Cal.
ILLUMINATING OILS.—Trademark—Yates & Co., (2) San Francisco.
CLOAKS.—Trademark—Liebes Bros. & Co., San Francisco.

PLOWING.—The rain was greeted by stubble fires all over the State, and next come the plows. The plow trade will doubtless be active this year. We have the pleasure of introducing to our advertising columns two plows which have been tried in California soil and found effective working instruments. They are the "Browne sulky" and "Browne gang" plows, and are introduced here by Messrs. Frank Bros. & Co. of this city, Sacramento and Portland. They have also the "Clipper," a single plow of high excellence. These implements should all be examined by intending purchasers.

THE SALMON BERRY.—One of our indigenous northern fruits is the salmon berry, of which we have received many favorable notes. It is described as similar to the strawberry in flavor, larger than the blackberry, and ripens from March to June. The color, bright yellow when ripe. The plant is very prolific and can be grown in any soil. It is a native of Humboldt county. It was shown at the San Jose fair and attracted much attention, and favorable comment from local reporters. The plants are advertised in another column.

SHOEING HORSES.—Whether a horse shall have a good shoe, a poor shoe or no shoe at all is now being widely discussed both in this country and in Europe. To our mind there is no doubt at all in the premises. The horse should have a good shoe. The Billings patent shoe claims to be just the shoe needed to overcome the evils which exist in shoeing. Its claim should be examined by all interested.

A TEMPERANCE HOTEL IN SAN JOSE.—The Lick House, corner 1st and San Fernando streets, San Jose, Cal., is a quiet, pleasant, handsomely furnished and well managed hotel, and conducted on strictly temperance principles. We would advise all families in search of pleasant, temporary quarters to put up with Mr. J. T. Hill the proprietor, when they visit that city.

SHORTHORN MEETING.—S. F. Lockridge, of Green Castle, Indiana, Secretary of the American Association of Breeders of Shorthorns, informs us that the seventh annual convention will be held at Nashville, Tennessee, beginning October 30th. All breeders are invited to attend.

NEW CARD.—The well-known pioneers of Sacramento, Messrs. Van Heusen & Huntoon, request the readers of the RURAL to read their advertisement in its columns. Having a large assortment of furniture to suit all customers, they ask them to call at No. 204 J street, Sacramento.

OREGON AND WASHINGTON TERRITORY.—The RURAL PRESS will be represented in Oregon and Washington Territory during the next few weeks by L. P. McCarty, an experienced canvasser. We trust he may succeed in greatly enlarging the circle of our northern readers.

THE SONOMA VINICULTURAL LECTURE.—The lectures by Prof. Hilgard and Dr. Bleasdale at Sonoma, to which we alluded last week, will be given on Saturday of this week, October 19th. We advise our readers in that neighborhood to go to Sonoma village on that day, if possible.

THE State Agricultural Society fair at Waverly, New Jersey, realized \$19,000.

Capital Woolen Mills.

EDITORS PRESS:—Home industry is the keynote to vibrate among all Californians, and in a general sense retains her pride by keeping close to her works. Situated in the center of general traffic, where the leading freights convey out and draw in her products of the world, the subject of this sketch holds itself relatively and approximately kin to the city and surname of its works. Its Directors and efficient Superintendent are closely identified to the growth and maturity of the leading house, always stood firmly to its interest during many adversities and drawbacks, but is now placed in the front and center of its adopted city and State. The new mill now in operation was built on the ashes of the old site, which is larger and more commodious and contains entirely new machinery of the latest and most improved pattern, having now run three years from its erection. It keeps 40 hands at work in this department—taking the shorn wool and transforming it into goods of fine and popular fabrics to be cut into suits for customers in neat and with quick dispatch. They deal directly through 12 to 16 large stock owners amid the rural pursuits of our county and close proximity with the pastoral regions of our State. The experience of years is fulfilling the prophecy of the faithful and filling in the wants so much wished, by the importation of blooded stock, thereby culminating to a higher degree of finer qualities of wool and texture, and bringing out a higher grade of goods than ever before. The dealers are now delivering their fall clippings, while in spring they receive their long wool for cassimere patterns, which are so popular. The amount of purchases annually, varies from \$50,000 to \$100,000 per year, or from \$4,000 to \$5,000 per month.

Their start in business, like every other trade, was small at first, but by close economy and strict principles to trade it rose Phoenix-like to its present proportions. Its space of room began to fill with varied stock of attractions till other accommodations had to be found, and they can now be seen at their large and commodious quarters, No. 248 J street. At this large salesroom is connected a tailoring establishment, where 50 hands are kept busy cutting and making suits from their popular fabrics of fancy cassimere for their heavy trade of customers. From two to three cutters are kept continually employed. During the past summer they found it necessary to have more efficient aid, and the services of Mr. J. H. Quatman were secured for the superintendence of the cutting and fitting. Mr. Quatman for many years was the most stylish and popular tailor in Sacramento, and his return at once augmented the sale of domestic goods for business suits, and created a large demand for foreign goods for fine dress suits; hence, at the present time, the company, in addition to their own stock of from \$15,000 to \$20,000, carry a stock of imported goods ranging from \$3,000 to \$5,000. In these goods the management purchase each month the newest styles and freshest patterns imported from France, Germany, Scotland and England, sparing no pains to give their customers the best that the market affords. The company manufactures a large amount of blankets, clothing and flannel wear for the wholesale trade. To all who visit Sacramento or send orders the company would be happy to show their articles for inspection, and ship such suits or articles that they may order. GEO. RICH.

It seems to us appropriate that the manufacturers of substantial woolen cloths should give employment to as many worthy tailors and seamstresses as possible, manufacturing suits to order upon very reasonable margins of profit. On the cash and one price system they can thereby maintain the reputation of their goods and insure their patrons a good article every time at a favorable price. We have ordered a \$35 business suit, in which we soon expect to shine.

Dairy Ranch Wanted.

A man who can command a reasonable amount of capital, is thoroughly experienced in the business in California, and pecuniary responsible, wants to hire a good Dairy Farm with 100 or more cows, for one or more years; valley land preferred. Address A. D., P. O. Box 70, Oakland, Cal. Reference—Office of the "Rural Press."

EDITORS PRESS:—I take great pleasure in calling the attention of livestockmen and all who care for the health and comfort of their horses to the advertisement in this number of the RURAL PRESS of S. Finch's horse medicine. The testimonials given are from gentlemen well-known in this community and all over the State, whose signatures could not be obtained to recommend an article of doubtful character. The preparation here advertised, for the first time I believe on this coast, has for a good many years been in use by some of the first horsemen in the United States. Montgomery Queen, who paid a large sum for a recipe for his own use, has traveled all over the country with impunity, keeping his horses free from disease in the most unhealthy localities. Capt. R. K. Ham, of this city, informed me to-day that the medicines advertised by Mr. Finch were the best he had ever used, and he kept them constantly on hand. G. W. M.
Santa Clara, Cal., Oct. 11th, 1878.

Wanted—Farms to Rent and to Purchase.

I have numerous customers in search of rural property daily applying at my office. Send full particulars. Address: A. Zeelandelaar (formerly with Labor Exchange) Real Estate, Business and Employment Agency, No. 627 Sacramento street, San Francisco. (Furnishes all kind of farm labor at the shortest notice free of charge to employers.)

Woodward's Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a bon-constrictor have just been added. New stars are constantly engaged for the Pavilion exercises. Rates of admission as usual.

A COMMENDABLE ENTERPRISE IN SAN JOSE.—Bro. Her-ring, late of the *Agriculturist*, has charge of the Union Free Reading Room, San Jose. He is endeavoring to establish the institution upon an enduring basis for the benefit of all.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, October 16th, 1878.

Trade is still slow, and prices for staple products unsatisfactory. The rain has accomplished a little advance in some kinds of Vegetables, because receipts will probably be lessened for a time. The markets are bare of news.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.			CLUB.		
Thursday....	9s	9d@10s	—	10s	—@10s	3d
Friday.....	9s	8d@10s	—	9s	11d@10s	4d
Saturday....	9s	8d@10s	—	9s	11d@10s	4d
Sunday.....	9s	8d@10s	—	9s	10d@10s	4d
Monday.....	9s	8d@10s	—	9s	10d@10s	4d
Tuesday....	9s	8d@10s	—	9s	10d@10s	4d
Wednesday..	9s	8d@10s	—	9s	10d@10s	4d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.			Club.		
1876.....	10s	1d@10s	4d	10s	5d@10s	8d
1877.....	12s	5d@12s	9d	12s	9d@12s	—
1878.....	9s	8d@10s	—	9s	10d@10s	4d

The Foreign Review.

LONDON, October 15.—The *Mark Lane Express* says: About the average crop of Wheat has been secured and Roots promise well, but the prices obtainable for all sorts of agricultural products have fallen so low that the season can hardly be a remunerative one for farmers; but within a few days some signs of a reaction have been noticeable, at any rate as regards sound parcels suitable for milling, which have advanced a shilling from the recent lowest point in several of the provincial markets. Imported foreign Wheat into London is again becoming liberal, being 64,000 quarters for the week ending Friday. Considering the dull state of trade and the heavy importation it is somewhat curious to observe that there is a decrease in stocks of Wheat in London as compared with 1877, when stocks at the water side and in the railway granaries on the 1st of October, as computed by the Secretary of the Corn Exchange, were rather over 400,000 quarters; whereas this year they are a little over 350,000 quarters. The decrease is probably apparent rather than real. The larger millers are accustomed to buy considerable quantities, which on reaching our shores are necessarily included in the arrival list, but being taken away to the mills and private warehouses do not figure among stocks in port. The stocks of Corn show an increase of about 55,000 quarters, and oats a decrease of over 317,000 quarters. Last Monday there was an improved demand for foreign Wheat from country millers, but sales were quite of a retail character. Transactions during the remainder of the week moved within very narrow limits, at a repetition of Monday's prices. Feeding Corn is generally dull and difficult to move, turns being against the seller.

Freights and Charters.

The *Call* says: The freight market continues at a complete stand still. Last transactions were at 35@40s for Wheat to Liverpool, former for wooden vessels. In port engaged for Wheat, 32,328 tons; for Merchandise, 9,360; unemployed, 68,444 tons.

Eastern Grain Markets.

NEW YORK, October 12.—The Wheat market is a little firmer. Nearly all the arrivals of Spring Wheat at the seaboard have consisted of very poor stuff, mostly grading No. 3, but it is poor for that. The first receipts of straight No. 2 Milwaukee have been received, and sold at about 98c. The market closed strong for all kinds of Winter, but dull for Spring. Winter has sold at 93c up to \$1.10½ for handsome white. Our exports of Wheat since the 1st of September are more than double what they were for the same period last year. The United States will probably have a surplus of 120,000,000 bushels of Wheat from the crop of 1878 available for export.

CHICAGO, October 12.—Wheat has been active during the week at low prices. Advances from other points have been unfavorable, and receipts large, which caused liberal offerings. Prices declined to-day, with but a slight fluctuation; two cents for cash and October, 1½ for November, and 1½ for December, below the closing figures of yesterday. The closing figures to-day were 80½ cash; for November, 81½; for December, 83½. Receipts for the week were over a million bushels, against 515,000 the same week last year; and shipments, 341,000 bushels, against 1,000,000 for the corresponding week last year. In the Corn trade a fair aggregate was reported on speculative and shipping account, but prices ruled lower all around. Advances from other markets were quiet, receipts fair, and the market active, partially in sympathy with Wheat. Cash Corn closed at 34@34½c; seller October closed at 34c; November, 34½; December, 33½; seller May, 36. Receipts for the week were 1,000,000 bushels against 846,000 last year. Shipments, 1,378,000, against 1,125,000 for the corresponding week last year.

Eastern Wool Markets.

NEW YORK, October 12.—The condition of the

Wool market is far from satisfactory. The demand during the week has been quite fair, but there is still an unsettled feeling as regards prices, the future not promising what holders were led to hope for. For medium grades, including California, Texas and Territory, there is still considerable interest manifested and fair sales are being made; but fine grades are taken only when the inducement is made sufficiently great for buyers to see a probable margin in the future. Carpet Wools are dull, but for foreign clothing there is rather more call. The sales for the week are: 200 bales Montevideo at 19c, gold, in bond; 12,000 lbs. Spring California, 20@21c; 10,000 lbs. Fall do, 17@20c; 45,000 lbs. Colorado, 13@17c; 38,000 lbs. Eastern and Valley Oregon, 22@30c; 2,500 lbs. medium Territory, 23c; 9,000 lbs. Spring Texas, 23c; 3,000 burry do, 12½@20c; 18,000 lbs. mixed do, 16@20; 52 bags fine Western do, 15@20c; 2,000 lbs. seconds Eastern do, 55@57½c; 3,500 lbs. Fall do, 20@20½c; 65,000 lbs. N. XX and No. 1 Ohio, 35@37c; 15,000 lbs. medium Western, 34@36c; 20,000 lbs. fine do, 32c; 20,000 lbs. fine unwashed do, 26c; 5,000 lbs. medium delaine, 40c; 4,500 lbs. unwashed combing, 27@28c; 4,000 super pulled, 33@35c.

PHILADELPHIA, October 15.—Wool quiet, firm at 18@25c. for fine and medium California, and 18@20c. for coarse.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Sept. 25.	WEEK. Oct. 2.	WEEK. Oct. 9.	WEEK. Oct. 16.
Flour, quarters.....	40,235	49,795	30,256	30,254
Wheat, centals.....	250,223	267,013	388,200	241,046
Barley, centals.....	77,051	61,500	87,267	72,823
Beans, sacks.....	6,259	8,629	4,450	10,364
Corn, centals.....	3,338	1,019	1,613	3,651
Oats, centals.....	19,461	16,271	26,203	12,729
Potatoes, sacks.....	20,214	17,831	19,399	17,539
Onions, sacks.....	671	1,621	1,197	1,410
Wool, bales.....	4,373	5,305	5,241	5,763
Hops, bales.....	902	854	903	2,888
Hay, bales.....	1,706	2,057	2,349	2,404

BAGS.—Prices are unchanged, excepting flour sacks which are lower. Freights have declined a little, and this lets in cotton goods at a slightly reduced cost.

BARLEY.—The range is the same as last week. We note sales: 218 sks bright Coast feed, at 95c; 300 fair do, at 92½c; 100 do, at 90c; 200 and 80 common Coast, 87½c; 100 poor, (mixed with burrs), at 80c.

BEANS.—Beans are arriving heavily; the receipts during the week being over 10,000 sks. This affects a slight reduction in rates. We note sales: 60 bags Pink sold at \$2.10 and 30 do Bayo at \$2.00 ctl.

CORN.—Corn holds its own, large Yellow selling a point higher than last week. We note sales of 200 sks long Yellow at \$1.17½ and 215 sks at \$1.15.

DAIRY PRODUCE.—There is no change whatever in prices. It is reported that some New York Butter is on the way here, to farther complicate the situation in this line. Cheese is slow and unchanged.

EGGS.—Rates are stationary at last week's figures.

FEED.—Millers are now working at the new Corn crop and Cornmeal declined about \$10 per ton. Hay is unchanged.

FRESH MEAT.—The market is quiet at last week's values.

FRUIT.—There is a notable advance in Mexican Limes. A few Australian Lemons are selling at \$7@7.50 per box.

HOPS.—The local market is stagnant and merchants are said to discourage consignments. Prices are wholly nominal, as no sales are made. Emmet Wells reports the New York market for Oct. 4th, as follows: "With more liberal receipts, and a better assortment to choose from, exporters have been able to pick up some 400 bales of choice Hops, and for these they have paid our highest quoted price. Brewers have also bought more freely, making a demand, on the whole, sufficient to take up nearly all of the floating stock of new. Business, no doubt, could be largely increased with more liberal arrivals, and without forcing it, for orders are here from abroad for choice Hops."

LIVE STOCK.—We hear of sales of 400 Lambs at \$1.20 each, gold; 573 Cattle in lots at \$15.50 and \$20.50; 3,500 Hogs at 3½@4½c on foot in silver.

OATS.—Feed Oats are selling at a lower range than prevailed a week ago. The standard price for milling Oats is \$1.37½ per ctl, and large transfers of Washington Territory Oats have been made at this figure. Some feed Oats have sold as low as \$1.12½.

ONIONS.—All good Onions have taken a sharp advance to \$2.00@2.12½. There is very little poor stock now coming in.

POTATOES.—Our list shows a few slight changes, generally in the line of improvement.

PROVISIONS.—The trade in Cured Meats is active, but rates are unchanged.

VEGETABLES.—An advance is noted in Cucumbers, Egg Plant, Green Peas and Tomatoes.

WHEAT.—The Wheat market does not vary much from day to day. Holders are generally not willing to trade at present prices, and transactions are small. We note sales: 2,000 centals choice Shipping alongside, at \$1.67½; 2,000 gold Shipping, at \$1.65; 250 fair Milling (pinched), at \$1.57½; 400 choice Milling, at \$1.68½; 1,600 and 1,900 do., at \$1.67½; 3,200 do., at \$1.65 (at Vallejo); 900 sks inferior, at \$1.40, and 800 do. do., at \$1.35, both at Vallejo.

WOOL.—Prices are nominal for sales are very

few, and the whole market is devoid of life. Our quotations represent present values, as nearly as can be ascertained. There have been sales of 108,000 lbs. Fall Wool at 11@15c, including some eastern Oregon Wool at 18c.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., October 16, 1878.

BEANS & PEAS.		Almonds, hd sh lb	7 @ 8
Bayo, cti.	2 @ 25	Soft sh'l.	14 @ 16
Butter	2 @ 50	Brazil	14 @ 16
Peas	2 @ 25	Peanuts	13 @ 14
Red	2 @ 25	Filberts	5 @ 6
Pink	2 @ 25		15 @ 16
San White	2 @ 25		
Lima	2 @ 25		
Field Peas	1 @ 52 1/2		
BROOM CORN.			
Old	3 @ 7		
New	4 @ 8		
CHICORY.			
California	4 @ 44		
German	6 @ 7		
DAIRY PRODUCE, ETC.			
BUTTER.			
Cal. Fresh Roll, lb	37 1/2 @ 41		
Fancy Brands	42 1/2 @ 45		
Pickle Roll, new	24 @ 27 1/2		
Pickin, new	21 @ 25		
Western	14 @ 16		
New York	1 @ 16		
CHEESE.			
Cheese, Cal., lb.	8 @ 12 1/2		
Eastern	8 @ 11		
N. Y. State	— @ —		
Gilroy Factory	11 @ 13		
EGGS.			
Cal. fresh, doz.	40 @ 42 1/2		
Ducks	30 @ 35		
Oregon	30 @ 32 1/2		
Eastern	18 @ 22		
do by express	27 1/2 @ 30		
Pickled henn.	27 1/2 @ 30		
FEED.			
Barley, ton	15 @ 26 00		
Corn Meal	28 @ 23 00		
Hay	7 @ 15 00		
Middlings	23 @ 23 50		
Oil Cake Meal	34 @ 00		
Straw, bale	25 @ 60		
FLOUR.			
Extra, hbl.	4 87 1/2 @ 5 37 1/2		
Superfine	3 @ 54 25		
Graham, lb.	3 @ 3 1/2		
FRESH MEAT.			
Beef, 1st quality, lb	5 @ 5 1/2		
Second	3 1/2 @ 4 1/2		
Third	2 @ 3 1/2		
Mutton	3 @ 4 1/2		
Spring Lamb	5 @ 6		
Pork, unpressed	4 1/2 @ 4 1/2		
Dressed	6 @ 6 1/2		
Veal	5 @ 7		
Milk Calves	6 1/2 @ 7		
do choice	7 @ 7 1/2		
GRAIN, ETC.			
Barley, feed, cti.	15 @ 21 00		
Brewing	15 @ 25		
Chevalier	15 @ 25		
Buckwheat	15 @ 25		
Corn, White	10 @ 15 1/2		
Yellow	10 @ 17		
Small Round	12 1/2 @ 17		
Oats	12 1/2 @ 17		
Milling	13 1/2 @ 17		
Wheat, Shipping	1 62 1/2 @ 65		
Milling	1 67 1/2 @ 70		
Off Grades	1 40 @ 60		
HIDES.			
Hides, dry	16 @ 16 1/2		
Wet salted	7 1/2 @ 9		
HONEY, ETC.			
Beeswax, lb.	30 @ 31		
Honey in comb.	11 1/2 @ 12		
do, No 2	8 @ 9 1/2		
Dark	8 @ 9		
Strained	5 @ 5 1/2		
HOES.			
Oregon	— @ —		
California	19 @ 12 1/2		
Wash. Ter.	19 @ 12 1/2		
Old Hops	3 @ 5		
NUTS—Jobbing.			
Walnuts, Cal.	8 @ 9		
do Chile	7 @ 8		

FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., October 16, 1878.

FRUIT MARKET.		White	6 @ 8
Apples, box	75 @ 1 00	Peaches	7 @ 8 1/2
do Cooking	35 @ 50	do pared	18 @ 12 1/2
Bananas, hnc	3 @ 4 00	Pears	8 @ 10
Cocoanuts, 100	5 @ 6 00	Plums	3 @ 4
Cranberries, hbl	13 @ 14 00	Pitted	15 @ 16
Figs, lb.	4 @ 5	Prunes	8 @ 10
Grapes, com, bx	35 @ 50	Raisins, Cal, bx	2 25 @ 2 50
Grapes, chice, do	60 @ 1 00	do, Halves	— @ —
Limes, Mex	16 @ 18 00	do, Quarters	— @ —
do, Cal, per M	— @ —	Flowers	2 75 @ 3 00
Lemons, Cal M	— @ —	Malaga	2 75 @ 3 00
Sicily, box	12 @ 14 00	Zante Currants	8 @ 10
Australian, bx	7 @ 7 50	VEGETABLES.	
Oranges, Mex.		Beets, cti.	50 @ —
M.	— @ —	Beans, String	— @ 3
Tahiti	— @ 35 00	Cabbage, 100 lbs	40 @ 50
Cal.	— @ 35 00	Cauliflower, doz	50 @ —
Peaches, box	50 @ 1 00	Cucumbers, bx	40 @ 50
Pears, box	75 @ 1 00	Egg Plants, box	75 @ 1 00
do, Bartlett	— @ —	Garlic, New, lb.	2 @ 2 1/2
do, Seckle	1 50 @ —	Green Corn, doz	2 @ 7
do, W Nellis	— @ 1 50	Green Peas	4 @ —
Pineapples, doz	3 00 @ 4 00	Lettuce, doz	10 @ —
Plums, lbs	5 @ 6	Parsnips, lb.	2 @ —
Prunes, box	— @ —	Horseshoe	8 @ —
Quinces, bsk	75 @ 1 00	Squash, Marrow	— @ —
St'cherries, chit	4 @ 6 00	fat, tn.	5 00 @ 8 00
DRIED FRUIT.		Summer do, bx	75 @ 1 00
Apples, lb.	3 @ 5 1/2	Tomato, 50 lbs bx	25 @ 50
Apricots	15 @ —	Turnips, cti	50 @ —
Citron	23 @ 24 1/2	White	50 @ —
Dates	9 @ 10		
Figs, Black	4 @ 6		

RICHARD THIRD exclaimed: "A Horse, A Horse, My Kingdom for a Horse!" yet if the horse had been poorly shod, his kingdom would have been a poor exchange. How much discomfort has been wrought by poor shoeing, interfering quarter-cracks and corns in horses, yet modern invention has overcome all these. The BILLINGS PATENT HORSESHOE can and does prevent all. It is an acknowledged triumph, is endorsed by every one that has ever used them, and meets in every respect a long felt need.

OBTAINED IN U. S. AND FOREIGN COUNTRIES; trademarks, labels and copyrights registered through DEWEY & CO., MINING AND SCIENTIFIC PRESS Patent Agency, San Francisco. Send for free circular.

CERTIFICATE OF PARTNERSHIP.

The undersigned, having formed a partnership to carry on the business of General Publishers under the firm name and style of Dewey & Co., Publishers, this certifies that the principal place of business of said partnership is situated at 202 Sansome street, in the city of San Francisco, State of California; and that Alfred T. Dewey, residing in the city of Oakland, State of California, and Warren B. Ewer, residing in the city of San Francisco, State of California, are all the members of said partnership.

ALFRED T. DEWEY,
W. B. EWER.

STATE OF CALIFORNIA,
CITY AND COUNTY OF SAN FRANCISCO.

On this second day of October, in the year one thousand eight hundred and seventy-eight, before me, Chas. E. Kelley, a Notary Public in and for the said city and county, personally appeared Alfred T. Dewey and W. B. Ewer, known to me to be the persons whose names are subscribed to the within instrument, and they acknowledged to me that they executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

Endorsed—Filed October 7th, 1878.
THOS. H. REYNOLDS, County Clerk.
By J. WHELAN, Deputy Clerk.

CERTIFICATE OF PARTNERSHIP.

The undersigned, having formed a partnership to carry on the business of Patent Agents under the firm name and style of Dewey & Co., Patent Agents, this certifies that the principal place of business of said partnership is situated at 202 Sansome street, in the city of San Francisco, State of California; and that Alfred T. Dewey, residing in the city of Oakland, State of California, and Warren B. Ewer, residing in the city of San Francisco, State of California, and George H. Strong, residing in the city of Oakland, State of California, are all the members of said partnership.

ALFRED T. DEWEY,
W. B. EWER,
GEO. H. STRONG.

STATE OF CALIFORNIA,
CITY AND COUNTY OF SAN FRANCISCO.

On this second day of October, one thousand eight hundred and seventy-eight, before me, Chas. E. Kelley, a Notary Public in and for the said city and county, personally appeared Alfred T. Dewey, W. B. Ewer, and George H. Strong, known to me to be the persons whose names are subscribed to the within instrument, and they acknowledged to me that they executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

Endorsed—Filed October 7th, 1878.
THOS. H. REYNOLDS, County Clerk.
By J. WHELAN, Deputy Clerk.

Land to Rent.

I have over 5,000 acres of level land ready for the plow, on the Reading Ranch, in Shasta County (which adjoins Tehama County on the north.) Good for wheat, rye, barley, oats and corn. Crops have never been known to fail on this or the adjoining land.

Crops Sure.

A large portion of the tract is fine bottom land. The whole is level and fair tillable land. Rent, with improvements, from \$1.50 to \$3 per acre, 1/4 cash in advance, and the balance after harvest. Railroad through the tract. Excellent local market. Climate good, wood and water plenty. Rainfall averages about 30 inches. Come and see the land.

EDWARD FRISBIE, PROP'R.
Anderson, Shasta Co., Cal.

Come and See.

INSTALLMENT NOTICE.

GRANOE'S BANK OF CALIFORNIA.
OFFICE: N. E. COR. CAL. AND DAVIS STS., S. F.
Notice is hereby given that at a meeting of the Directors, held on the 8th day of October, 1878, an Installment (No. 4) of Ten (10%) per cent., equal to Ten (\$10) dollars per share, was levied upon the Capital Stock of the Bank, payable immediately, in U. S. Gold Coin, to the Cashier at the office of the Bank. Any Stock upon which this Installment shall remain unpaid on the 1st day of December, 1878, will be Delinquent and disposed of according to law.

G. W. COLBY, President.
FRANK McMULLEN, Sec'y.
San Francisco, October 14th, 1878.

DIVIDEND NOTICE.

Notice is also given that a Dividend (No. 4) of Ten (10%) per cent., equal to Three (\$3) dollars per share, on the paid up Capital of the Bank, was declared at the same time and place; due and payable immediately at the office of the Bank as above stated.

G. W. COLBY, President.
FRANK McMULLEN, Sec'y.

FURNITURE,

— AT —
VAN HEUSEN & HUNTOON'S,
204 J STREET, SACRAMENTO.

Prices always the Lowest, and the best assortment.

KEPT ON THE EASTERN PLAN.

LICK HOUSE,

Corner First and San Fernando Sts., SAN JOSE, Cal.

J. L. HILL, PROPRIETOR.

\$1.50 to \$2 per day. \$6 to \$10 per week. Carriage attends to trains.

MUSICAL BOXES REPAIRED.

MUSICAL BOXES

For Holiday, Birthday and Wedding Presents.

M. J. PAILLARD & CO.,

Manufacturers and Importers,

No. 120 Sutter St., San Francisco.

GRAND HEADQUARTERS.

DRAKE'S BAY COLONY,

Shafter's Rancho, Marin County,
California.

13,600 ACRES,

Between North Pacific Coast Railroad and Pacific Ocean, three hours travel by steamer and railroad from San Francisco.

Schooners make the trip to Drake's Bay in six hours, and to Tomales Bay in nine hours. Produce can be shipped to market from the colony by schooner as well as by rail.

Title—United States patent.
Climate—Unsurpassed for mildness and equability.
Soil—Without exception the richest on the coast.
Water—Abundant. A failure of crop has never been known.
Wood—Sufficient for fire and fencing.
Agriculture—The soil, climate and situation render this property particularly adapted to those who wish desirable homes at a short distance from San Francisco. With the exception of tropical fruits, anything that grows in California can be produced upon this land.

This rancho, famous for its dairies, is now being subdivided into 20, 40 and 80-acre farms, under the auspices of the California Immigrant Union, and will be sold at low figures.

TERMS—One-fourth cash; balance in one, two and three years, with interest at eight per cent. per annum on deferred payments.

For full information, transportation, maps, etc., apply to

WM. H. MARTIN,

General Agent California Immigrant Union,

230 Montgomery Street, Room 23, S. F., Cal.

Parties desiring to visit the tract will be provided with tickets upon application as above

GREAT SLAUGHTER

IN SEWING MACHINES.

We are now offering for sale, at \$10 EACH, the following machines:

FLORENCE,

WHEELER & WILSON,

GROVER & BAKER.

THESE MACHINES ARE

Guaranteed to be in Perfect Order,

And many of them NEW.

Parties in the country can have them packed and shipped free of any extra charge. Address,

WILCOX & GIBBS Sewing Machine Co.,

No. 124 POST STREET,

SAN FRANCISCO, CAL.

Vertical Feed Victorious.

THE NEW

"DAVIS VERTICAL FEED"

Lock-Stitch Sewing Machine.

Lightest running Shuttle Machine in the world.

SO CONFIDENT ARE WE THAT THE

VERTICAL FEED

(Which is as far in advance of the old feed used on all other machines as steam is ahead of horse-power, and is the exclusive property of this company), is the

ONLY POSITIVE SUCCESS

In all Departments of Sewing, that we make the following offer:

One Thousand Dollars

Will be given to any person (sewing machine experts included) who will, with any other sewing machine, follow the "DAVIS VERTICAL FEED" through its vast range of practical work.

All lovers of progressive science and mechanical perfection should see it, and every lady in the land should examine and try the "DAVIS VERTICAL FEED" before deciding to purchase an inferior machine, or a single-thread plaything without a tension.

It is impossible to make a strong, elastic, or lock-stitch with any but a shuttle machine.

We are selling WHEELER & WILSON, GROVER & BAKER, SINGER and HOWE Machines for \$10 Each.

For descriptive circulars, price lists, samples of work and terms, apply at the office of the

PACIFIC COAST DEPARTMENT,

130 Post Street, San Francisco, Cal

MARK SHELTON, AGENT.

Underfed Machines taken in exchange as part payment. Our prices are very low for cash. Branch Office, 26 Fourteenth Street, Oakland, Cal.

BULBS SEEDS TREES.

SEVIN VINCENT & CO.,

Wholesale and retail dealers in and

GROWERS OF SEEDS,

Keep Constantly on hand a complete stock of Vegetable, FIELD, GRASS, FLOWER & TREE SEEDS.

Also, FLOWERING PLANTS, BULBS, FRUIT AND ORNAMENTAL TREES, ETC.

We call attention of farmers and country merchants to our unusually low prices. All seeds warranted fresh, pure and reliable. Trade price list on application.

* We issue the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is Handsomely Illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT & CO.,

P. O. Box 1023.] 607 Sansome Street, S. F.

California Land Agency,

NO. 276 FIRST STREET,

San Jose, Cal.

Has on hand and is in constant receipt of Maps and Charts of

Public Lands for Location.

For from \$25 to \$50 I will select and survey for you a good claim, giving full details of its quality and adaptability to different kinds of agricultural or stock raising. I locate Pre-emptions,

Soldier or Sailor's Homesteads,

TIMBER, WOOD OR DESERT LANDS,

And have also numerous

Tracts of Cheap Lands For Sale.

For further particulars apply as above to

C. C. RODGERS,

Land Agent and Surveyor.

BENNETT, PATTERSON & CO.,

Manufacturers and Dealers in

Furniture, Bedding, Etc.

Walnut, Marble Top and Cottage Sets a Specialty.

Salesroom, 422 and 422 1/2 1st Street, Auzerais Building,

SAN JOSE, CAL.

60 Chromo and Perfumed Cards [no 3 alike], name in Gold and Jet, 10c. CLINTON BROS., Clintonville, Ct.



BARLOW J. SMITH, M. D., announces to his friends and former patrons that he has resumed hygienic medical practice at the Smithsonian Medical and Phrenological Institute, 635 California street. The institute provides all forms of Electro-Medical baths and Hygienic boarding. Terms reasonable. Phreno-Physiological examinations in regard to health free. The most powerful Electroized Magnet ever used in the treatment of nervous and chronic diseases is employed in this Health Institute. Mrs. Dr. Smith has charge of the Female Bathing Department. Phrenological examinations daily.

Agricultural Articles.

- THE -

California Horse-Power

For Irrigating Purposes.

The best in the World.

No machinery, and easily worked. One horse works two (2) eight-inch pumps, raising water 50 feet with 5-foot stroke, at the rate of 12,000 gallons per hour. For particulars send for circulars.

Manufactured at the SACRAMENTO FOUNDRY, corner Front and N streets, Sacramento, Cal., by

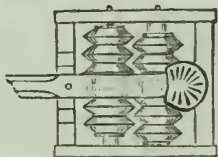
WM. GUTENBERG & CO.

FARMERS' FRIEND!

Patented

January 2d,

1878.



The Best

in the

State!

The Golden State Ground Roller

- AND -

CLOD CRUSHER!

State Rights For Sale. Manufactured at the

SACRAMENTO FOUNDRY,

Corner of Front and N Streets, Sacramento, Cal., by

WM. GUTENBERG & CO.

The Famous "Enterprise,"

(PERKINS' PATENT
Self Regulating

WINDMILLS,

Pumps & Fixtures.

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crankshaft with double bearings for the crank to work in, all turned and run in babbitted boxes.

Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES, LIVERMORE, ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE & CO., 401 Market Street.

The Randall Pulverizing Harrow.

A COMPLETE SUCCESS.



OVER 10,000 IN USE.

Local agents wanted. Descriptive circulars and Price list free on application. Address,

CLAUDE V. BURKE,

Sole Agent.

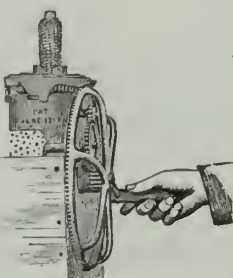
Yolo, Yolo County, Cal.

Peerless Corn Sheller.

It is so cheap (costing only \$8), that almost any one can afford to buy one. It is so rapid, it will shell almost as fast as a \$40 machine, and seven or eight bushels per hour is not above its capacity. It weighs only 13 pounds and is simple and durable. For particulars, address

WEISTER & CO.

17 New Montgomery St., S. F.



MATTESON & WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW

Took the Premium over all at the great plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON,
STOCKTON, CAL.CALIFORNIA
(Patent)

WINDMILL.

Self-Regulator.

This is the cheapest and best Windmill in the country. Has 78 fans, 10 feet in diameter.

Price, \$75.

Every mill is warranted. Before you buy, send for a circular, giving full description to

BERRY & PLACE,

Market, head of Front street, SAN FRANCISCO, Cal.

THEOPHILE PINARD,

Alameda Carriage Factory,

SAN JOSE, CAL.



Blacksmithing of all kinds Neatly and Promptly done.

Horseshoeing a Specialty.

THE DINGEE & CONARD CO'S
BEAUTIFUL EVER-BLOOMING
ROSES

We deliver **STRONG POT ROSES** for Winter Bloom and Fall Planting, safely by mail, at all post-offices. Five Splendid Varieties, your choice, all labeled, for \$1; 12 for \$2; 19 for \$3; 26 for \$4; 35 for \$5; 75 for \$10; 100 for \$13. Send for our New Guide to Rose Culture, and choose from over 500 Finest Sorts. Our Great Specialty is growing and distributing Roses. **THE DINGEE & CONARD CO.,** Rose-Growers, WEST GROVE, CHESTER CO., PA.

West Berkeley Lumber Yard,
ALAMEDA COUNTY.

(Successors to Z. B. Heywood & Co.)

Lumber, Shingles, Sash, Doors, Lime, Brick, and Builders' Hardware

Sold at the lowest San Francisco rates. Strict attention given Country Orders. Boats Loaded at the Wharf for all Points on the San Joaquin and Sacramento Rivers. Cars of the C. P. R. R. Co. loaded at the yard. Orders received at 22 California Street, San Francisco, or at the hardware store of G. W. Babcock, No. 955 Broadway, Oakland.

JOHN F. BYXBEE, Proprietor.

THOMAS RICHARDSON, Manager.

California Steam Navigation Co.

The Steamers

ALICE GARRATT and CITY OF STOCKTON

LEAVE SAN FRANCISCO

DAILY (Sundays excepted) at 5 P. M., from Washington Street Wharf, near foot of Market street.

LEAVE STOCKTON

DAILY (Sundays excepted) at 4 P. M.

T. C. WALKER,

President.

G. A. CARLETON,

Secretary.

MANSION HOUSE,

Corner of HUNTER STREET and WESKA AVENUE,
STOCKTON, CAL.

A Strictly first-class Lodging House. Rooms neat and clean, by the day, week or month.

MRS. M. A. HOLDEN, Proprietress

DALTON & GRAY,
Commission Merchants,

WHOLESALE DEALERS IN

All Kinds of Country Produce.

404 & 406 Davis Street, San Francisco.

Consignments Solicited

Engraving done at this office.

Nurserymen.

CO-OPERATIVE

Nursery & Fruit Company,

- OF -

LOS ANGELES COUNTY.

THOS. A. GAREY, Pres't & Business Manager.

Capital Stock, \$250,000 - All Subscribed.

210 acres of land in Orchard and Nursery. 500,000 Orange and Lemon Trees now ready for market of the best and thoroughly tested varieties, including

GAREY'S MEDITERRANEAN SWEET ORANGE

And

GAREY'S EUREKA LEMON.

These trees are thornless, the fruit almost seedless, early and regular bearers. These varieties have been endorsed by the Southern Horticultural Society.

Garey's Lecture on Orange Culture

Sent post-paid on receipt of Five (5) Three (3) Cent stamps. No person should engage in Orange culture without first reading this Lecture, which treats on all the principal points.

Our trees are all budded on Orange roots.

PRICE CATALOGUE, containing full description of the above mentioned varieties, sent free. Address,

THOS. A. GAREY, President,

Or F. B. FANNING, Secretary, Postoffice Box 188, Los Angeles, California.

STRAWBERRY PLANTS
FOR SALE.

I offer for sale a large lot of strong, well-rooted plants of the

MONARCH OF THE WEST.

On my grounds the Monarch has done splendidly. The plants are strong, vigorous and healthy. The berries large, beautiful and well flavored. From two acres planted in January last, my sales netted over freight and commission, \$1,200 in less than six months.

For particulars address

J. W. BRIGGS, San Jose,

Or JOHN ROCK, Nurseryman, San Jose, California.

SHINN'S NURSERIES.

NILES, ALAMEDA COUNTY, CAL.

We invite attention to our large stock of

Fruit Trees and Ornamentals,

Of the most approved varieties. Also, Coffee, Cork Oak, Olives, Guavas, English and Black Walnuts, Magnolias, Loquats, Butternuts, Small Fruits, Evergreens, Etc. We have a choice stock of the Diospyros Kaki (Japanese Persimmon), of our own growing, and also, grafted stock imported direct from several Japan Nurseries. Address for catalogue and terms,

DR. J. W. CLARK, No. 418 California St., San Francisco,
Or JAMES SHINN, Niles, Alameda Co., Cal.

ESTABLISHED IN 1858.

PEPPER'S NURSERIES.

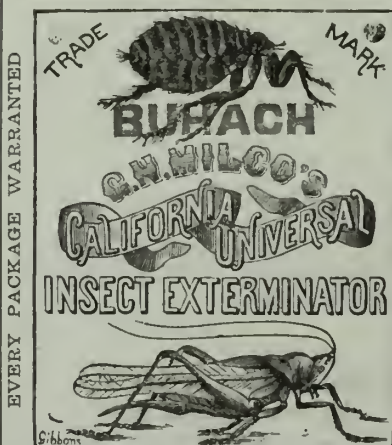
An unusually fine stock of trees is offered for sale at lowest market rates for reliable nursery stock, comprising all the leading kinds and varieties of hardy fruits. Also a general assortment of evergreen trees and shrubs, blue gums, Monterey cypresses, etc., in boxes for hedge and forest planting.

My trees are grown in a sandy loam, without irrigation; can be no finer rooted trees grown; wood ripens early, and can be safely transplanted as soon as sufficient rain falls, for lifting the stock. Early planting recommended. Catalogues with list of prices ready for distribution October 1st.

Address,

W. H. PEPPER,

Petaluma, Sonoma Co., Cal.



This trade-mark is registered by G. N. Milco, May 7th, 1878, in the Patent Office at Washington, D. C. The most wonderful discovery of the Nineteenth Century.

A California Production.

Retail price, 25 cts. and 50 cts. per package, and 25 cents for each Insulator. These will be sent by mail on receipt of price, either in money or stamps.

Directions for use with each package.

G. N. MILCO,

Patentee and Sole Manufacturer, Stockton, California.

Ask your druggist and groceryman for it.

STEWART & BUCKLEY, Agents,
513 Sansome Street, San Francisco, Cal.

Seedsman.

R. J. TRUMBULL & CO.,

SUCCESSORS TO

R. J. TRUMBULL,

Growers, Importers, Wholesale and Retail

Dealers in



FLOWERING PLANTS AND BULBS, FRUITS AND ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock

EVER OFFERED ON THE PACIFIC COAST.

Prices Unusually Low.

*"Guide to the Vegetables and Flower Garden will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,

419 and 421 Sansome Street, S. F.

SEEDS.

SEEDS.

IMPORTED.

Crosby's Extra Early Marblehead Mammoth } Sweet Corn.
Stowell's Evergreen }
Mexican Sweet, New }

Early Canada } Yellow Flint Corn.
Early Dutton }

Long Red Mangel Wurtzel } Beet Seed.
Yellow Globe }
White Sugar }

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street, San Francisco

SEEDS.

TREES.

SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses. RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

Importer and Dealer in Seeds,

425 Washington Street, - San Francisco.

ORANGES and LEMONS.

The best budded varieties of both native and foreign Orange and sweet rind Lemon trees for sale. Prices to suit the times. For particulars address

D. C. HAYWARD,

Semi-Tropical Nursery, Orange P. O., Los Angeles Co., Cal.

New Music Books.

Johnson's Method for Singing Classes,

By A. N. JOHNSON, is a book of admirable simplicity and clearness of explanation, and is endorsed by practical Singing School teachers as the best. 77 Airs for practice, 40 Hymn Tunes, 16 Anthems, and 24 Glee and 4-part Songs, all intimately united with the instructions, forming a perfect and easy method for teaching the Notes. The moderate price is in its favor.

Price, 60 Cts., or \$3 per dozen.

Clarke's Harmonic School for the Organ,

By Wm. H. CLARKE, is a new and magnificent Instruction Book for those who wish to play the Organ (Pipe or Reed) in Church, is full of fine music for practice or enjoyment, forms a taste for the best kind of Organ Music, and has the unique and special merit of preparing the learner to compose and extemporize Interludes and Voluntaries, as well as to play them.

Price, \$3.00.

The Musical Record.

The Weekly Musical Paper of the country! DEXTER SMITH, Editor. All Music Teachers need it. Five cents per copy, \$2 per year. 312 pages of music per year.

Any book mailed post free for Retail Price.

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, New York

Calvert's Carbolic
SHEEP WASH,
\$2 Per Gallon.

After dipping the sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

50 Perfumed, Snowflakes, Chromo, Motto, etc., CARDS, with name, 15c. G. A. SPRING, E. Wallingford, Ct.

WAKELEE'S

PATENT

SQUIRREL

AND

GOPHER



Exterminator!!

The valuable nature of this article has tempted several inexperienced, ignorant or unscrupulous persons to force similar appearing, but very inferior, preparations on the market, which being confounded in the minds of some with this poison, has a tendency to bring it into disrepute. H. P. WAKELEE & CO. were the first to prepare poisoned grain for this purpose so that it would retain the effects for a great length of time without spoiling, and obtained U. S. Letters Patent for that only; but the POISONOUS COMPOUND is prepared by a SECRET FORMULA and has NEVER BEEN SUCCESSFULLY IMITATED. Suit has or will be commenced against all infringements.

The public are warned against attempts which seem to be made to gain a false reputation for imitations by manufacturers putting out their own poison and apparently producing astonishing results. That their operations were a system of jugglery may be proven by any farmer putting out the two poisons on the same day. One pound of WAKELEE'S will kill as much as from eight to fifteen pounds of the imitation, care being used to purchase both articles from an uninterested dealer.

Great Reduction has been made in Price of 5-pound Tins and in bulk, 65-pound Cases.

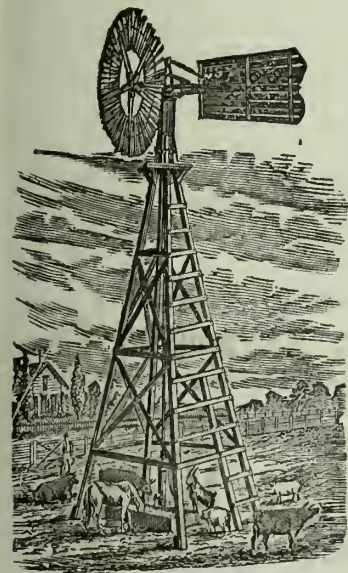
H. P. WAKELEE & CO.,

Importers of Drugs and Chemicals.

AGENTS AND MANAGERS GOLDEN CITY CHEMICAL WORKS,

Office, Corner Montgomery and Bush Streets,

San Francisco, Cal



IF YOU WANT A

Wind Mill,

THE MOST POWERFUL AND THE NEAREST PERFECTION OF ANY IN USE—ONE THAT PROTECTS ITSELF IN A GALE, WILL KEEP YOUR TANK FILLED WITH

Water Without Waste and Without Attention,

EXAMINE THE RECENT

Improvements of Mr. Bachelder,

As now Manufactured by the

Bachelder Manufacturing Co.,

NAPA, CAL.

In consequence of spurious imitations of

LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

Lea & Perrins

which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Cross and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

DAIRYMEN, ATTENTION!

The Best Butter Makers in the World!

THOROUGHbred JERSEY BULLS,

1st Premium at California State Fair, 1878.

Will stand at Forest Grove Stock Ranch, at \$10 per cow. Dairymen can have bulls to run on their own ranches and pay me in calves. For particulars address

F. J. BARRETTO,

Downey City, Los Angeles County, Cal.

Chance in the Nursery Business.

There is a good chance in Tehama County for a skilled man who will go to work and start a nursery. The location is one mile from Vina station, in Tehama County, in a good growing region of country; the land is first-class and water abundant. A man is wanted, with good references, who will start a first-class nursery in partnership with the owner of the land. Address,

S. C. DICUS,

Vina Station, Tehama County, Cal

18 ELEGANT new style Chromo Cards, with name, 10c., postpaid. Geo. I. Reed & Co., Nassau, N. Y.

H. H. H.
HORSE MEDICINE,
D. D. T.—1868.

As a horse medicine it is superior to any liniment ever invented. For RINGBONE, SPRAIN, SWELLEN, CALLOUS LUMPS, and all OLD SORES, apply freely so as to blister, from three to five days in succession, and in four or five days, if not cured, repeat as at first. SPRAINS, STIFF JOINTS, BRUISES, WINDGALLS, and all slight ailments, apply a small quantity so as not to blister. Saddle Sores, Cuts, and all other sores where the skin is broken, mix the liniment half and half with any kind of oil, and apply in moderation.

WILLIAMS & MOORE, Proprietors,
STOCKTON, CAL.

MONEY TO LOAN

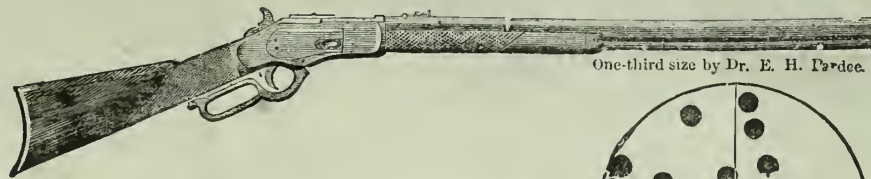
AT LOWEST RATES, .

ON FIRST-CLASS COUNTRY REAL ESTATE AND OTHER APPROVED SECURITIES,

McAFEE BROS., Real Estate and Loan Brokers,
202 Sansome Street, - San Francisco.

Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Pardee.

The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder,

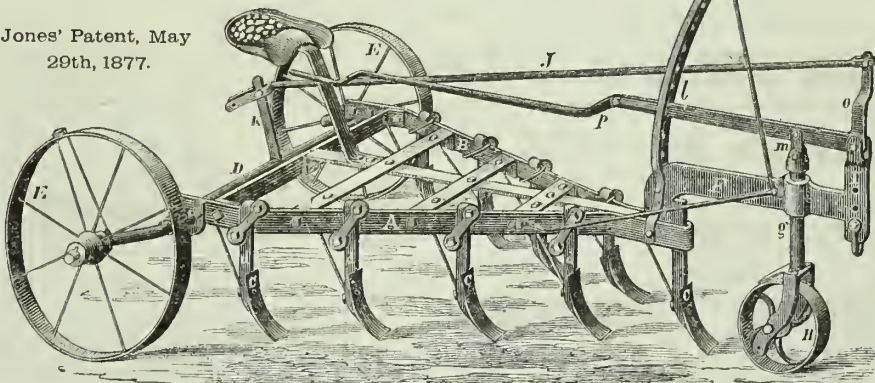
JOHN SKINKER, No. 115 Pine Street, San Francisco,

SOLE AGENT FOR THE PACIFIC COAST.

HOLLY & MACCOON'S CULTIVATOR.

Manufactured by Holly & Magoon, Stony Point, Sonoma Co., and Holly & Jones, Lakeville, Sonoma County.

Jones' Patent, May 29th, 1877.



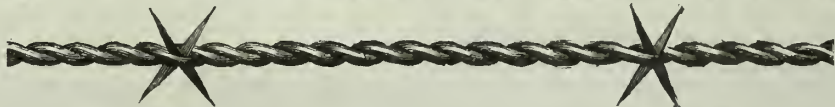
This Cultivator is made by practical men, after years of experience, and better meets the wants of California farmers than anything before offered.

Made of the best material (with wood or iron frame), and warranted in every respect.

Prices REASONABLE.

For further information address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Francisco and Sacramento, Cal.

TO OUR PATRONS AND THE PUBLIC.



Having obtained the control of the SCUTT PATENT MACHINERY on the Pacific Coast, we beg leave inform you that we are manufacturing the

Scutt Patent Four-Pointed Steel Farbed Fence Wire,

And we claim its superiority for the following reasons, viz: It is plaited, thereby preserving the grain of the metal. Our machines do not twist the single strand. We use steel made by the Seaman & Martin process for bars. Our wire is made entirely by machinery, and is perfectly uniform. It is plaited by patent process, and is weather-proof. There are no knife points. It is four-pointed, having 128 points to the rod, double the number of any two-pointed wire. Our wire is wound upon strong spools, and can be shipped any distance.

To those needing fencing, and being obliged to transport it long distances by rail and wagon road, we would especially call attention to the difference in cost between barbed wire and lumber, as well as in cost of material. It takes 300 pounds single strand for one mile, and less than one-half as many posts as board fences. Please address orders to

GRANGERS' UNION, Manufacturers,
280 and 282 Main Street, STOCKTON, Cal

SWEET
Chewing

JACKSON'S BEST

NAVY
Tobacco

Awarded highest prize at Centennial Exposition for fine chewing qualities and excellence and lasting character of sweetening and flavoring. The best tobacco ever made. As our blue strip trade-mark is closely imitated on inferior goods, see that Jackson's Best is on every plug. Sold by all dealers. Send for sample, free, to C. A. JACKSON & Co., Mfrs., Petersburg, Va.

L & E. WERTHEIMER, Ag'ts, San Francisco

THE CAPITAL WOOLEN MILLS,

248 J STREET,

SACRAMENTO, CAL.

YOUR NAME PRINTED on Forty Mixed Cards for Ten Cents. STEVENS BROS., Northford, Conn.

BROWNE GANG PLOW.

Browne Gang Plow,

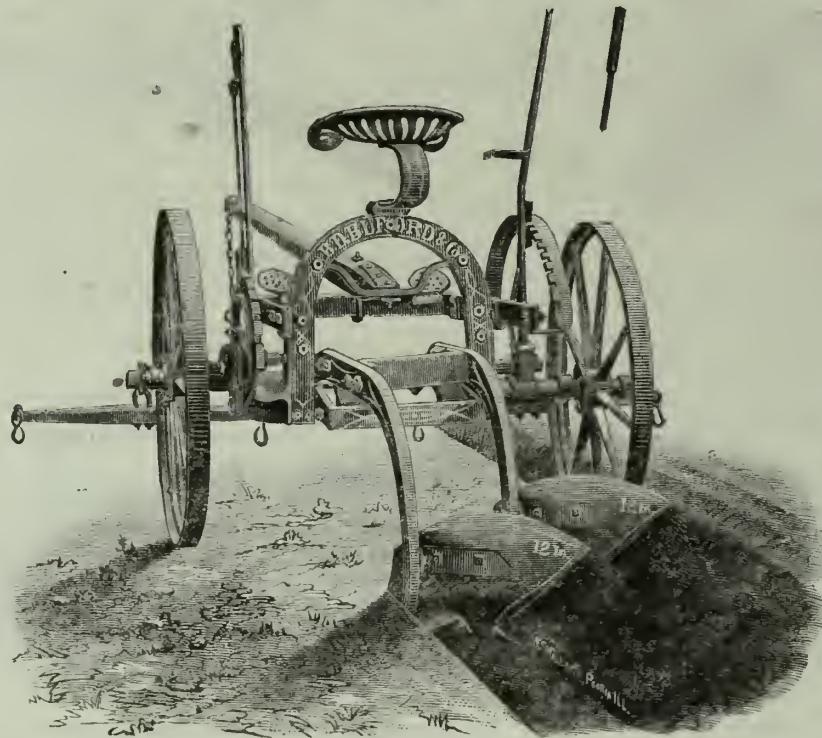
LIGHT DRAFT,

Strong and Durable.

DOUBLE LEVER

Specially adapted for the

PACIFIC COAST.



In this Gang we have at last succeeded in combining

Strength and Durability

— WITH —

Lightness of Draft.

IT IS A

Double Lever Plow,

And all the points of superiority of the

BROWNE SULKY

(Can be affirmed in this Gang.

Browne Gang, cuts 10 or 12 Inches, and Extra Shares, \$100.

MANUFACTURED BY B. D. BUFORD & CO., ROCK ISLAND, ILLINOIS.

BROWNE SULKY.

The sale of this SULKY PLOW has been ENORMOUS, not alone on this Coast, but all over the Country.

The Browne Sulky is made entirely of Iron and Steel.

The Plow proper is managed by one lever, and in a moment set to plow any depth. The left-hand lever is used to level the Plow. When once set for depth, it need not be changed for the same land. The draft is direct from the beam; and changes, either to plowed ground or land, are made by the elevators, as in a common plow. Its superiority consists in the ease with which it is handled and set to plow any depth. And like the other Plows made to run level on side hills by means of a plate attached to the ratchet, the lever can either be locked or allowed to play loose, so that when working in clods or rough ground the wheels will not throw the point of the plow out of the ground. By a new arrangement, the tongue can be made to follow the line of draft, and a strong feature of this Plow is, it is always taking sufficient cut without pulling the horses to land.

Browne Sulky, cuts 14 Inches, Extra Share and Rolling Coulter, \$80.

Browne Sulky, cuts 16 Inches, Extra Share and Rolling Coulter, \$95.

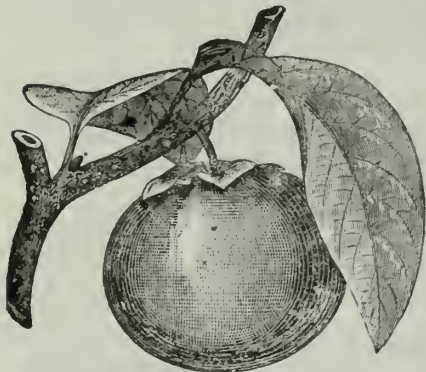
FRANK BROS. & Co., 349 Market Street, San Francisco, and Corner Second and J Streets, Sacramento, Cal.

PRICES REDUCED!

THE DIOSPYROS KAKI

— OR —

JAPANESE PERSIMMON.



This new and popular fruit at prices to suit the times. Seven best varieties for sale by

HENRY LOOMIS,

Nos. 419 & 421 Sansome St., San Francisco.

Send for Circular. Good and reliable Agents wanted.

FARM AT AUCTION In Santa Clara County.

Will be sold on THURSDAY, October 24th, 1878, at 11 o'clock A. M.,

At the residence of the late W. S. HOLLENBECK, near MOUNTAIN VIEW.

320 acres of fine farming land—a part of the Hollenbeck farm. Also, at the same time and place, a large amount of stock and agricultural implements belonging to said farm, consisting in part of 8 Horses, 3 Colts, 6 Cows, 16 young Cattle, 50 Hogs, 3 Farm Wagons, 1 Spring Wagon, Plows, Harrows, Blacksmith, Carpenter and Farming Tools, etc. Sale positive to settle the Estate.

For further particulars, apply to or address

Geo. H. Briggs or Wm. Wright, Executors, MOUNTAIN VIEW, Santa Clara County, Cal. JAS. A. CLAYTON, Auctioneer.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y.

California Furniture Manufacturing Co.,

224 & 226 BUSH STREET, SAN FRANCISCO, CAL.

Manufacturers, Importers, Wholesale and Retail Dealers in

FURNITURE, Etc.

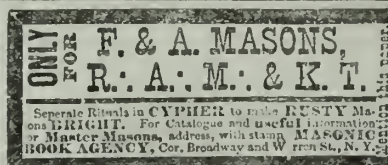
LATEST STYLES AND LOWEST PRICES.

COMMERCIAL HOTEL,

Nos. 273, 275, 277 and 279 Main Street, Smith's Brick Building, STOCKTON, California.

FRED. C. HAHN, - - PROPRIETOR.

Rates, \$1.25 and \$2.00 per day. This popular Hotel has 61 well-appointed rooms, has been refurnished and refitted in the most elegant manner, and is the most comfortable and commodious Hotel in the City. Large, pleasant rooms for families. A Coach will be at all Trains to carry Passengers free to the Hotel.



SETTLERS and others wishing good farming lands for sure crops, are referred to Mr. Edward Frisbie, of Anderson, Shasta County, Cal., who has some 15,000 acres for sale in the Upper Sacramento valley. His advertisement appears from time to time in this paper.

MONEY ADVANCED ON

WHEAT

In Warehouse at the Lowest Rates.

McAFEE BROTHERS,

No. 202 Sansome Street, San Francisco, Cal.

ESTABLISHED 1868.

FURNITURE AND BEDDING.

The largest stock, best variety, and lowest prices of substantial furniture on the Pacific Coast is at

W. D. COMSTOCK'S,

Fifth and K Streets, Sacramento, Cal.

THE PACIFIC LAND AND TRUST CO.

Rent Houses, Collect Rents, and Manage Estates.

HOUSES AND LOTS FOR SALE in this City, Oakland and Alameda. Lands and ranches for sale in all parts of the country. Agents in the principal cities. Collections made throughout the Coast.

No. 534 California Street.

Baling Fencing Telegraph Telephone Galvanized WIRE

Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.

A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.,

SAN FRANCISCO.

WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

Finch's Horse Medicines.

FINCH'S CURE ALL—Warranted to cure all sores, old or fresh, on man or beast.

FINCH'S CELEBRATED HORSE RENOVATING MEDICINES—Used by Montgomery Queen for many years.

Testimonials.

MR. S. FINCH.—Dear Sir:—I have given your Horse Medicine a fair trial, and find that it works satisfactorily, and feel fully warranted in recommending it to the public.—Geo. B. McKee, San Jose, October 10th, 1878.

I fully concur in the above testimonial, having given it a thorough test.—S. A. Bishop, Pres't S. J. & S. C. R. R. Co.

MR. S. FINCH.—Sir:—I have used your Cure All on sores of all kinds, and can say it is the best I have ever had in my barn for man or beast. I have also used your Renovating Medicine, and can fully recommend it to the public. It should be kept in every stable, even to feed occasionally to keep horses in good condition. I keep it in my stable all the time, and would recommend it to all horsemen—especially to those keeping livery and railroad horses.—R. K. Ham, Santa Clara, Cal., October 10th, 1878.

I hereby certify that I have sold Finch's Cure All in Michigan for 10 years, and it has always given good satisfaction. And for the last three or four years have sold it in San Jose, and can truly say that it is one of the best preparations for healing all manner of sores on man or beast I have ever sold.—S. H. Wagner, Druggist, San Jose, October 10th, 1878.

For sale, wholesale or retail, by

S. FINCH, 661 Seventh St., San Jose. Or at WAGNER'S and RHODES Drug Stores, San Jose, Cal.



Volume XVI.]

SAN FRANCISCO, SATURDAY, OCTOBER 26, 1878.

Number 17.

A New Early Peach.

The profit which lies in bringing the earliest peaches upon the market each year is well known to fruit growers everywhere. Hasteru growers have a wider market than we for the sale of these high-priced "early birds," and yet if a man can market a few hundred weight even at 50 cents per pound and some more at 25 cents per pound, there is more money in it than in handling an orchard full later in the season. The effort to reap these large rewards has resulted in bringing forward at least half a score of early peaches, between which there has been much strife for preference, and each has achieved victories of its own in localities which are best fitted for its growth. California has done herself due credit in the early peach contest in bringing forward "Brigg's red May," which has yielded sacks of coin to the fortunate ones who had the trees. Among others of the more famous of early peaches are the "Alexander," the "Amsden," and the "Early Beatrice," all of which have been introduced in this State in return for the trees of "Brigg's red May," which have been sent eastward. But the strife still goes on, and any peaches which can claim a few days advantage of those which are now the earliest become objects of interest to growers.

The engraving on this page shows the newest "early peach," which has laid its claim to the name by scoring a week in advance of the "Alexander," and the "Amsden." The original tree is a seedling and grew in a garden in Waterloo, New York, and the peach takes its name from its birthplace, "Waterloo." Perceiving the precocity of the fruit, the tree was purchased by Ellwanger & Barry, of Rochester, New York, the well-known tree and plant growers. This firm ranks among the first as propagators of new varieties and the "Waterloo" was not permitted to hide its light under a bushel, but is already budded into healthy stocks and available for all who desire to try its value. Of course the success of the fruit in different localities has yet to be proved, but the risk is only such as those who are on the lookout for new varieties are ready to assume.

As shown in the engraving on this page the "Waterloo" is a handsome, good sized peach. The following exact description is furnished by the growers: Size: Medium to large, good specimens measuring nine inches in circumference and weighing five ounces. Form: Round, with a deep suture on one side, from stem to apex; stalk in a deep cavity; apex slightly depressed. Color: Pale whitish green in the shade, marbled red deepening into dark purple crimson in the sun. Flesh: Greenish white, with abundance of sweet vinous juice; adheres considerably to the stone like Hale's, Amsden, etc. Glands, reniform.

Concerning observations on the fruiting of the "Waterloo" during the present season Ellwanger & Barry write as follows: "The first specimen ripened in western New York, this season July 14th, and measured ten inches in circumference. All were picked and mostly overripe on the 19th of July. It is believed to be a week earlier than Alexander and Amsden. Mr. Lisk says that in the summer of 1877, it ripened several days earlier than these varieties, and this year, judging from unripe specimens of Alexander and Amsden, now before us, we think "Waterloo" fully a week in advance. It is a remarkable keeper, ripe specimens having been kept in perfect condition in our office nearly a week after being picked. These same

specimens were ripe at the time they were gathered. It will therefore be of great value for shipping. We think we are perfectly safe in rating it as the largest and finest of all the very early peaches."

This is the letter of introduction which the "Waterloo" brings to California growers. Doubtless we shall ere long have an opportunity of knowing how the novice disports himself under California conditions.

KEEPING BEANS FROM THE WET.—There are large areas of beans in the Southern counties which will hardly be harvested before the rains, because of the slowness of the processes in vogue, and the scarcity of labor. Some readers may profit by the advice of a New York farmer, who tells the *Rural New Yorker* that he knows nothing better to keep beans dry in the field

NOTE ON POTATO BLIGHT.—We alluded last week to an experiment of Mr. E. H. Cheney of Bodega, and promised a statement of the results gained. In order to determine whether the evil rested in the potato or in the exhaustion of the soil, he proceeded, as he says, as follows: "The old varieties blighted so badly that I did not dig them, and I sowed the land to barley. Of course the potatoes left in the ground came up among the grain, but made small tubers. The next season I plowed and planted again to potatoes. The potatoes that grew with the barley came up with the others, which is termed among farmers volunteers. In weeding, I let several remain to see if they would blight. To my astonishment these potatoes that have remained in the ground for two years, reproducing themselves, excluded from the action of the air

Gossip about Wheat.

As we hinted last week the early rains fell upon many unthreshed stacks of wheat, especially in our coast counties or regions adjacent to the coast. The wet portions of the stacks were spread open to the atmosphere in many cases and the dry air and bright sunshine which followed the storm quickly dried the grain and reduced the loss to a minimum. The threshers were not long delayed by the rain, and the scattered grain was in many cases caught up from the ground to the cylinder and quickly sacked. During the present continuance of fine weather the threshers are putting in all daylight hours and the work bids fair to be well cleaned up before the winter sets in earnest.

The course of wheat values is not materially changed. The failure of the bank in Scotland, which for amount throws our bank losses into the small figures, and for promptitude of punishment gives another contrast in that the officers and directors of the Scotch bank were cast into prison, while our bank mismanagers still proudly walk the streets—these stirring financial events in Great Britain set the English stock and money market all agog, but did not exert any appreciable effect upon the wheat market, unless it were to create depression to hold the prices still down upon the lower benches. Nor does the teapot tempest which has sprung up between Great Britain and the Ameer of Afganistan seem to affect wheat prices. This Asiatic broil is said to be great in its possibilities, in that the lion, in his subjugation of the jungles of Afganistan, may cross the track of the Russian bear, for this bear seems disposed to warm his frozen toes by snub-tropical rambles whenever opportunity offers. It is thought by some that the present trouble may reopen the whole contest between England and Russia. However this may be, the situation will require a little time to develop its full features, and for the present wheat values are unaffected.

We have been interested in watchfulness to discover how the cra of low prices affects the English wheat growers. We find the following note in the *London Farmer*, latest received: "For many years it has been said that wheat at £2 per quarter is as good as gold. But what assurance is there that it will remain so? It is true that much reduction on that price seems impossible either for English or for foreign grain, but then 40s. is a price beneath which the farmer certainly cannot sell at other than a loss. Prices now are at 40s. to 45s. for English, for American red, for Saxonska, and for Indian wheat. What would these prices be, had France a good harvest instead of a bad one? Probably 35s. to 40s. instead of 40s. to 45s. per quarter. In other words, the English farmer's position, instead of being one of little or no profit, would be one of more or less serious loss."

Thus it appears that the line of demarcation between profit and loss in English wheat growing is at 40s. per quarter. This is equal to \$2.10 per cental according to our weights and money. Wheat ruling now at \$1.65 per cental in this market is crowding pretty close to the cost of production, although there is probably a small margin of profit in many cases. The profit is, however, so small that it would not take much of a decline to change from profit to loss, as in the case of England at \$2.10 per cental.



THE "WATERLOO," A NEW EARLY PEACH.

than the following: "Take a couple of fence boards or rails, place them side by side with just enough room between them to drive a row of stakes. Let the boards or rails lie north and south; place the pulled beans on the boards, piling them up and twining the vines among the stakes which should be 20 inches or two feet apart. With stakes about four feet high and boards or rails 14 feet long, from 8 to 12 such heaps will clear an acre of heavy beans. When once put up, they will stand a great deal of bad weather without injury. The bean leaves shed the rain like so many shingles, while the long, narrow heaps afford a thorough circulation of air, so that if wet gets in the heap, it dries out before injury is done."

"RARUS" EN ROUTE.—A dispatch from Omaha says that John Splanu left on Saturday with "Rarus" (the 2:13½ horse) for Denver, where the horse trots next Friday, and at Salt Lake on the 30th, after which he goes to San Francisco to remain for the Winter.

and sunlight, grew well and matured perfectly free from blight, and from the seed thus obtained I am raising perfectly healthy potatoes." Mr. Cheney also makes this remark with reference to the blight as it occurs in his section: "The potato disease as it prevails here is different from the disease that has long prevailed in the East. There the potato rots in the ground as well as after being dug; here the disease attacks the vines at the blossoming season, and the result is a crop of half-matured potatoes unfit for food but with fair keeping qualities."

THEY WILL PRODUCE THEIR OWN WILD OAT HAY.—The *Hawaiian Gazette* excites local industry in these words: "The article of oat grass, for which our people pay to California very large amounts annually, as food for horses, could be produced in any quantity required to supply the demands of the people, and thus keep within themselves the money which now goes out to pay for the article which they could produce themselves."

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Notes from Santa Clara County.—No. 2.

EDITORS PRESS:—In my last, some mention was made of San Jose and surroundings. What was said of her fine climate, soil and products, her handsome homes, extensive groves of ornamental trees and other attractive aspects, will apply full as well to her no less beautiful sister, The City of Santa Clara.

That delightful drive of shaded avenue three miles in extent connecting the two, is now almost one continuous street, lined on each side with charming country residences, with here and there a plain old-fashioned farmhouse left to remind you of olden times. Except in name, they might well be considered one and the same city.

Without farther preliminary, we turn to special items.

A Joint Stock Cheese Factory.

A few farmers north of town, engaged principally in raising hay, have recently formed a company, putting the capital stock at \$4,000 and \$50 to the share, for the purpose of manufacturing butter and cheese. The shares are all taken; the buildings will be erected the ensuing autumn or winter, and business will commence in the spring. They hope to make it more profitable than mere hay-making, besides allowing some rest to the land. They enjoy the benefit of the best of flowing wells. They can raise in abundance all the alfalfa, corn, beets, pumpkins and vegetables of the sort required for the fall business, when this kind of produce commands a fair price. By this simple change of base they hope to secure victory where nothing short of defeat or a drawn battle at best could be looked for at the ruling ruinous rates for hay.

They will also in a measure avoid coming in competition with those

Large, Fine Dairies.

Located near Gilroy and around Lake San Felipe on the southern border of the county, where green grass abounds early in the season, giving them on the other hand more of the advantages from the spring trade. The products of some of these dairies are well known and highly appreciated in the San Francisco market, judging by the prices they frequently bring. Reeve Bros., at Gilroy, milk from 400 to 600 cows, and during the best half of the year, turn out from their factory about 180,000 pounds of cheese, an average of 1,000 pounds per day, giving them a place among the largest manufacturers in the State. Most of their bills of sale the past season run from 12 to 14 cents, and some as high as 18 cents, which is considerably above the average of published quotations.

Mr. Albert Willson, at the Lake, may be mentioned as another case among others who is making a superior article, commanding high figures. As it is intended expressly for immediate use, it is not made so firm and will not keep so long as the products of some of the larger dairies, but it is exceedingly palatable and represented generally to meet with a ready sale.

A House within a House

Is a somewhat novel and ingenious arrangement in dairy construction resorted to by Mr. A. Herman, of Evergreen, for keeping his milk and butter at a temperate heat in summer. The headline tells the whole story. The roof and walls of the main outer building are a sufficient protection against the heat from the sun's rays. A free circulation of air is kept up around the dairy within, which is rendered nearly as cool as a cellar without sharing its attendant dampness.

Thoroughbred Cattle.

Nowhere have so many been found engaged in importing or breeding this class of stock. Many are the premiums awarded to Santa Clara county for excellence in this direction. Messrs. Bradley, Hensley, Quinn and Younger, of San Jose; Messrs. Jones & Haggin, of Lick Avenue; Mr. C. Clark, of Milpitas; Mr. S. B. Emerson, near Mountain View, and Mr. Coutts, of Mayfield, are recalled to mind among others embarked to a greater or less extent in the business.

Too much could scarcely be said in praise of Col. Younger's herd. They were seen on the eve of setting out for the fairs. They were in excellent condition and appeared to very great advantage. They all seemed deserving of a premium, and it was a matter of some gratification to learn that some of them were adjudged the highest. The fair premium lists which you have printed during the last few weeks, show that the other Santa Clara breeders received due recognition for their excellent cattle.

Some beautiful white Leghorns were met with at Mr. C. A. Pitkin's place in the Willows. He is the corresponding secretary of a poultry association, and seems thoroughly versed in every branch of the

Poultry Business.

He thinks there is no country like this where the price of grain and other food for fowls is so cheap in comparison with rates for eggs and poultry. He descants eloquently, almost enthu-

siastically, and is so brimming full of facts and figures upon the beauties and profits of the business, that the whole subject might well be committed to his hands, as he has consented to become a regular contributor. Before dismissing it, one or two crumbs may be thrown out.

Mr. Abel, of Berryessa, who has as fine a lot of as thrifty looking fowls as one could wish to see—the hens represented as very prolific layers—says the secret of his success lies in feeding well and not confining them too long to one kind of grain. This he is in the habit of soaking, more particularly barley, when underground. There can be no question but that (like Plato's two-legged animal without wings) they are greatly benefited by a frequent change of diet.

Mr. C. A. Wyman, of Cozy Nook, furnishes at present his mite with a promise of also becoming a correspondent on this and other matters of interest. He usually sows a patch of sunflowers for his hens during the molting season, at the same time adding scraps of iron to their drinking water, which he deems very beneficial, the reasons for which being too apparent to require any comment.

Turkeys in the Pumpkin Patch.

Mr. J. T. Bubb, in the foothills near Saratoga, finds his turkeys very serviceable allies, at the same time making a substantial livelihood for themselves, in destroying the chief enemy of the pumpkin—a ravaging worm—that first devours leaves and vines and then makes mince meat of the pumpkin itself by way of dessert.

While at Mr. B.'s I had the pleasure of seeing in operation

A Novel Clothes Press.

The invention of Messrs. Bubb and Watkins of this county, and patented through the Agency of Dewey & Co., which I hope to see illustrated in your valuable papers. It is styled a mangle, which seems almost a misnomer in view of its smooth and beautiful work. The machine is turned by hand as a windlass, the clothes being made to pass between rollers, similar to those used in Lovell's washing machine. It is represented to accomplish in half an hour what would ordinarily require half a day by the process of ironing, saving much time, labor, fuel and wear or burning out of stoves. Mrs. B. speaks in glowing terms of the Lovell washing machine, and says that inquiries have been made for it. By all means let it be advertised in the RURAL PRESS. More anon. A. C. K.

Santa Barbara County—No. 1.

EDITORS PRESS:—Santa Barbara county, lying between Ventura on the south, and San Luis Obispo on the north, occupies a seacoast of about 100 miles, and in area ranks with the largest counties. The principal portion of the white settlers of this county can date their residence back only a few years. Not till the mining fever subsided did this part of the coast attract particular interest; and even then, as now, did it suffer the disadvantage of not being so easily reached as lands lying on the rivers more contiguous to the mines, where large business would enable companies to carry freight and passengers more promptly and cheaply. And then to settle on lands near to the great mining population was to ensure the best cash market for all kinds of produce, and thus the natural result soon followed, that good lands well located were soon all taken up, and the simple possessory title often was worth a large price.

As the State continued to increase in population, and the mines to offer less attractions, the attention of enterprising ones was called to this coast country; and had it not been so largely occupied by grants and native Californians, who very reluctantly yielded to the changes required by the more modern fashions, would have been long since thickly settled and improved. Even so late as 1861 I passed through this county along the coast, and found very few white settlers. The city of Santa Barbara had been surveyed, and 366 blocks properly laid out on a map—in order, perhaps, to write the euphonic names of the streets for the admiration of settlers who should some day arrive by sea or land. But at that time it seemed to be scarcely a village, either in respect to population or business. But to-day it is a well regulated city, having a population of nearly 6,000. Its hotels, churches and school buildings, as also the city and county public buildings, are quite creditable. The public schools have 11 teachers. The College school, now under the charge of Miss Keeuey and able assistants, is doing the work of a grammar and high school. The Roman Catholics are also having a female boarding school, and a mission school for boys. With all these it seems as if the place was amply supplied with schools, and from what I saw in the higher grades of the city schools, I would infer that good schools is one of the advantages they claim in with their healthful climate—so much extolled by all its residents and visitors, that to mention it now is about equivalent to saying, Pennsylvania produces excellent coal, or Liverpool is noted for good salt.

Passing from Ventura over the new road just completed is a very pleasant and interesting trip, as compared with the old sea-shore road. In many places the scenery is grand, and at every turn is changing and giving all varieties

of landscape. One can pass over the fifteen miles, and be so delighted that he will almost regret to cross the little stream that places him in Santa Barbara county; but as he merges out into the little oak valley of

Carpinteria

He is again taken by surprise to find here what is beyond description, a beautiful settlement fenced by mountains and the sea and abundantly covered with oaks—except where they have been removed with much labor to open a space for a neat little cottage home or perchance for a country palace. In this latter order the Santa Barbara artist, Mr. Ford, takes the lead. His residence though not very imposing shows great care in all its little ornamental details. To the visitor the great attraction of the villa is the fine and very tasteful arrangement and display of very interesting exotic plants and shrubbery, each neatly marked with its proper botanical name. In this manner he opens to his visitors an instructive book on botany; the example is worth following, and if it was soon, there would be a more general familiarity with the true names of plants.

Just here for fear I should forget it, I would say that a visit to Santa Barbara city would be an utter failure unless he had seen the art gallery of Prof. Ford at his studio. During his prolonged absence at the Yosemite and among the Sierras, he kindly provided for the public to have access to his studio and examine his large number of interesting paintings, and also his large collection of Indian relics, minerals, shells, etc., that are carefully classified and labeled. During his absence, Mrs. Childs, city librarian, has charge of the studio.

The first impression on entering Carpinteria though very favorable, is not changed by more minute acquaintance. It is quite thickly settled with 20, 40 and 80-acre places, and a few larger ones. The valley comprises three school districts, each taking considerable pride in having a first-class school.

Residents.

L. A. Colby makes a fine showing of nursery trees, but his specialty is apple trees. E. H. Pierce shows excellent varieties of fruits. S. H. Olmstead has a very large almond orchard. Chas. Fish, who is well known to all the early Nevadians as the Mining Recorder, at Virginia City, has selected Carpinteria as his home and erected a beautiful dwelling, but has since been induced to accept a position of trust and honor in a mining company, causing him to reside in San Francisco for the present.

The town of Carpinteria amounts to nothing except a very small village. There were some signs of a weak effort to start saloons for billiards and drinks, but the material for their support was too scarce.

The valley is a sheltered one, and with rich, deep soil, producing excellent corn, grain and vegetables; also the principal fruits as apples, peaches, pears, apricots and various nuts. The apricot is considered the surest and most profitable fruit. The tree bears well and the fruit can easily be dried if not all sold fresh; and so far the dried apricot sells readily.

New Wharf.

The storms of last winter destroyed their wharf, but it is being replaced with a new one more substantial.

Good oak timbered land here is valued very high, and yet is very cheap for those able to invest for healthy and retired homes.

Santa Barbara, October 1st. B. W. C.

The Siskiyou County Fair.

EDITORS PRESS:—The 13th county fair of Siskiyou county came to a close last evening. This was by far the greatest success of any fair ever held in this county. It commenced Wednesday, Oct. 2d, and continued four days. There was an immense crowd present, including a large number from Oregon. The town of Yreka was full to overflowing. Several good horses were brought from Oregon to contest for the different purses. However, I believe our horses retained about three-fourths of the money in the county. The main race, the "Murphy," was won by an Oregon horse. The exhibit at the pavilion was far greater ever before.

The Ashland woolen mills made a good showing of woolen goods.

Mr. Strickland was re-elected President by a unanimous vote. Next year we hope to see a larger exhibit, with greater variety, and more competition in the pavilion.

Farmers report crops in this county as only about one-half the usual yield. Times are close. The general health of the county is not as good this fall as usual. Improvements are the order of the day everywhere; new buildings, new fences, etc., gives one the idea that the residents of the county intend to stay here awhile—and live while they do stay.

We had a light shower here a few days before the fair commenced, that left the race track in excellent condition, purified the atmosphere, and makes us all feel better. Occasionally old "Jack Frost" puts in an appearance, and "nips" things that are exposed.

R. D. NUNNALLY.

Yreka, Cal., Oct. 6th.

PERUVIAN COAL.—The *Chemiker Zeitung* informs us that a rich deposit of coal, sufficient for the supply of all South America for a long period, has been discovered at Chala-Alta, in Peru.

HORTICULTURE.

Vegetable Wax.

EDITORS PRESS:—The most important article for illuminating purposes in Japan is the candle made from the fruit of the *Rhus succedanea*; a tree about the size and appearance of the common sumac of this country. It is grown more or less extensively almost everywhere in Japan, and especially in the western provinces, from the south northward to the 35th degree.

The tree has a quick growth, and attains the diameter of a foot and a half, and a height of 25 feet. They should be planted about seven feet apart, and shaded on the sunny side for the first season. The ground should be well stirred and kept free from weeds. They begin to yield berries the third year, but in California may bear the next year after planting. The berries are the size of a small pea, of a white color, hanging in clusters, and contains the wax as a thick, white coating of the seed. The full-grown tree averages 50 pounds of seeds annually, about one-half of which is wax. It is a hardy plant, growing on indifferent soil, and living for many years. In Japan they are planted by the roadside, on embankments, and out of the way places.

The wax is obtained by the berries being crushed, steamed, and then placed in hemp bags and pressed in a wedge press. It is also obtained by boiling the bruised seed and skimming the wax from the top. This wax is a palmetine or glycerite. When first extracted it is of a yellowish white color, and somewhat softer than beeswax. It is slightly soluble in absolute alcohol, and completely so at the boiling point. It is resolved by fusion with potassium hydrate into palmitic acid and glycerine. It melts at 127°, and when formed into candles gives a fine clear light. In ordinary candle making the unbleached wax is used. When washed and bleached in the sun and air, it assumes a pure white color.

The vegetable wax of commerce is the imported article from Japan. From experiments made it can be readily grown here. The tree is highly ornamental, as well as valuable for its production. As the foliage changes it has the peculiar bright and attractive hues so remarkable in the autumn landscapes of the Eastern States. The wax is in great demand, and commands a large price (40 cents per pound). It is valuable for candles, making the gloss for linen, for waxing thread, and other purposes for which the ordinary wax is used. Since it may be grown so readily, its cultivation could undoubtedly be made a source of profit, and especially since the present process of extracting honey from wax will tend to lessen the supply of the ordinary article, and also leave ample room for this new industry.

HENRY LOOMIS.
San Francisco, Cal.

THE APIARY.

Notes on Honey Production.

EDITORS PRESS:—I see by the *Beekeepers' Magazine* that the beekeepers of the East are panic-stricken over the quantity of honey produced in California; also at the low price. The price is enough to panic any beekeeper here. Why should this be, is the question? Thurber & Co. say there is not over two-thirds of a crop; that being a fact, how can it come down lower than the blackest West India molasses? I understand there are tons in San Francisco and three and one-half cents per pound is all that is asked for it, and it is good honey. Now, the cost of cans, cases, freight to tide-water and wharfage, and freight to the city and commission, costs certainly the three cents; leaving one-half a cent profit for the producer. If an apiary average 1,150 pounds per colony, and if a man can take care of 100 stands (which is enough) he has \$75 for his summer's work. I understand by sheepmen that the cost of feeding the herder is 25 cents per day. A beekeeper has got to be with his bees 150 days at the least. Now, who pays for his grub and clothes, to say nothing of a family (for he must not have any, the business will not allow it)?

How long will this continue? It looks discouraging at present. Bees have come down from \$7 to \$2 in the short space of five months.

"Honey Dew."

I saw a piece in our county paper some time ago about converting honey into alcohol. This can be done. I experimented on this years ago, and, if I remember right, I think honey will make 50% proof liquor. I never made any alcohol, nor did I have any way of testing it. I simply converted a common kettle into a still, with the help of a few yeast powder boxes for a worm. So you see it was not a fair test at all. I am satisfied there was 50% of clear extract of honey. This being the case, and allowing three cents for honey, and that is more than an average for the season's crop, and a gallon of honey should always weigh 12 pounds and more, the cost would be 36 cents per gallon, making a cost of 72 cents per gallon for the raw material.

Then the internal revenue comes in, which I know nothing about. Perhaps the revenue officer of your city will enlighten us a little on this subject. We would be very thankful, as the bee business has gained ground up to the present time, but the price of this year's crop will set everything back in the shade unless something is done to keep it up.

Over Crowding.

There are about 30 apiaries in Ventura county with an average of 200 stands to the apiary, with perhaps 80 personally interested who look to their bees for support. Nearly all have families. Now, at three cents per pound how can they live? There have been 300 tons shipped from the county this season, and in spite of the low price there are a great many more going into the business next season and they are looking up good locations. There have been six here to see me, from Santa Barbara and they complain of their honey being dark and strong. As I said heretofore, honey made near the coast is not good color. Those men have found it out and are hunting for new locations. I will say a few words more here about the fog from the coast. The breeze begins in summer about 9 or 10 A. M., and by watching the fog at such times you will see that it comes to about the same point every day going toward the east. By watching this I find that right at this point, or as near as practicable, is the best location for an apiary. All the small canyons leading from the main valley are just the same, and where the different kinds of sage abound I think one equally as good as another. I do not like to see apiaries crowded close together, for I calculate that 200 or 300 stands of bees can and do gather all the honey for two or three miles all around them. It is lost time if a bee alights on two or three dozen flowers that have been visited before and all the nectar gone. I don't think beemen pay attention to this as they should. I think six miles is as near together as apiaries should be located. The late dry season has demonstrated this to a fact. All beemen, however, are not going to agree on those points, and you all have as good right to believe your own ideas as I have mine and we are not going to quarrel about it at all. My ideas cost you nothing as far as I am concerned, but sometimes a little hint helps to develop something we should otherwise have lost.

R. W. KENNY.

Scenega, Ventura county, Cal.

FLORICULTURE.

Plants Growing in Windows.

EDITORS PRESS:—As the time draws apace when growing plants in the window will again be in order, a few remarks on their treatment will not be out of place. We shall not go into general details, but shall aim to correct a few glaring mistakes made by amateurs.

Thousands of amateurs who try to cultivate plants in the window, in pots, tubs, or window gardens, fail, mostly because they allow the pots or other receptacles to be exposed to the hot sun. Now, we never see the roots—that is, the part which draws nutriment from the soil—fully exposed to the sun in a state of nature, and this should teach window gardeners to shade the pots and boxes in which their plants grow. Another cause of failure is allowing the leaves (being in reality the lungs of the plants) to get dirty. It is imperative that they should be kept clean.

I have frequently been asked why plants did not do well in windows, and it is often difficult to answer without seeing the plants, but the general failures are from the causes above named and from improper and careless watering. It stands to reason that if half the roots of the plants are burned off repeatedly, and the leaves are killed with dust, and then the whole plant water-soaked, sickness will be the result. It is easy to clean off the dust by taking a little brush or broom and dipping it in water and brushing over the leaves of the plant two or three times a week. To prevent the pots from being in full sun, have the shelf made lower than the window sill, just so the top of the pots will be even with the sill. Proper watering is a part of floriculture which can only be acquired by careful observation.

Answers to Inquiries.

SWEET ALYSSUM.—Do you know of any good and delicate flower of a pure white color for winter blooming?—A. R. L.

We know of nothing finer or more delicate than the sweet alyssum. If given a pretty light situation it will bloom continually during the winter. To have good plants for winter, sow seed in July or August; in October remove to pots filled with good rich loam, water freely, using tepid water; they will commence flowering in November and flower all winter.

FALL FLOWERS.—We find a lack of good fall flowers; what do you consider good subjects?—M. R.

As a rule, you will find fall bloomers among the more robust and strong growing annuals, a few tuberos rooted and several perennials. We mention as particularly good for California, dahlias, tritonia, tuberose, zinnias, mangolds, verbenas, petunias, alyssum, aster, chrysanthemum, anemone japonica, and perennial phlox.

W. C. L. DREW.

Artesian Wells—No. 2.

Underground San Francisco.

Well No. 25, on the map published in the last issue, is 157 feet deep. In boring it, 50 feet of quicksand was passed through.

No. 28; 140 feet deep; quicksand, 40 feet.

No. 27; depth, 95 feet. This is a flowing well, and cannot be lowered by pumping, and is pure, cold, soft water. Sand, 29 feet; clay, 6 feet; black mud, 10 feet; yellow clay, 8 feet; quicksand, 15 feet; black clay, 4 feet; marl, 9 feet; broken sandstone, 8 feet; sand and gravel, 8 feet.

No. 28; depth, 130 feet. This is a flowing well, and cannot be lowered by steam pump, and yields pure, soft, cold water. Sand, 28 feet; blue clay, 12 feet; yellow clay, 15 feet; sand, 14 feet; blue clay, 8 feet; yellow sand, 15 feet; quicksand, 10 feet; soft sandstone, 12 feet; blue clay, 4 feet; washed gravel and sand, 6 feet.

No. 30; 160½ feet; sand, 60 feet; clay at the bottom. Across the street from this well an-

other went 142 feet, passing 40 feet of black sand.

No. 31; 141½ feet; sand, 60 feet; all hard sand and water down.

No. 32; depth, 98 feet. Water rises to surface, and has been pumped at the rate of 88,000 gallons per day, lowering it 20 feet only when it comes to a stand, and can be lowered no farther. Strata passed: Sand, 31 feet; blue clay, 14 feet; quicksand, 12 feet; yellow clay, 5 feet; sand, 18 feet; hard pan and soft sandstone, 10 feet; sand and gravel, 8 feet. At this depth struck bedrock, after bringing up chips of redwood; the lower stratum of sand contained gold.

No. 33; depth, 125 feet. Pure cold water, sufficient for all purposes intended. Sand, 31 feet; blue clay, 7 feet; sand, 20 feet; yellow clay, 3 feet; quicksand, 25 feet; light blue clay, 12 feet; sand, 10 feet; flinty sandstone, 9 feet; sand and gravel, 8 feet.

No. 34; 116 feet deep; water at 90 feet; rock at the bottom. Between 34 and 20, there is said to be about 25 wells.

No. 35; 128 feet deep. Yields a large amount of water for laundry and dwellings. Strata:

Sand, 35 feet; blue clay, 9 feet; hard pan, 8 feet; yellow sand, 15 feet; yellow clay, 10 feet; sand, 12 feet; blue clay, 4 feet; quicksand, 16 feet; soft sandstone, 12 feet; sand and gravel, 7 feet.

No. 36; 157 feet deep. Quicksand, 60 feet.

No. 37. This well has already been spoken of as obtaining no artesian water at a depth of 212 feet, though so near to good wells. Quicksand, 24 feet; then hard sand without water, 80 feet; then blue clay all the way down. At 180 feet struck a log, perhaps manzanita or sycamore.

No. 38; 121 feet to black rock; pure water.

No. 43. A well in this neighborhood struck water at 57 feet, but not sufficient supply; at about 80 feet, gold-bearing gravel was met with; at 93 feet vegetable matter was brought to the surface. Dr. Joseph Le Conte pronounced it coniferous wood, and probably the root of redwood. At 120 feet this well struck a supply of water.

These wells illustrate well the general theory of artesian wells. The water, falling upon the surface, flows along until it reaches pervious ground, when it sinks down, with greater or less rapidity according to the nature of the material, until it reaches some stratum through which it cannot pass. On this it accumulates, running always to the lowest points. The pervious material on the surface at San Francisco is generally sand, which has been blown in from the ocean, or has been used in filling. The impervious strata which collect the water

are composed of clay, or rock; the deepest stratum on which lies the best water being overlaid with a gravelly, porous conglomerate. On examining the data of the above wells it will be found that sand is generally passed through first, then clay, then sand again succeeded by clay, then sand again with the water-bearing gravel. Above both the first and second clay water may be obtained, but being more or less contaminated with the surface drainage of the immediate vicinity, is passed through and neglected by those wishing good wells.

The average depth of the deeper wells is 150 feet, but whether in all cases the shallow and deep ones are fed from different sources it is not possible to decide from the data. At a depth of from 150 to 200 feet, and in some cases less, rock is struck, which has been bored into hundreds of feet without water being obtained, as for instance in wells 39 and 40 as mentioned in the last issue. It is said that this same rock has been bored into at Benicia, the Government well there being 1,500 feet deep, but at that depth no water is obtained. We know of no satisfactory account of the geological character of this rock. If this were determined

it might be stated definitely whether or not it does outcrop far in the interior, and hence whether or not water may be expected below it flowing under us to the west far out to sea.

It is difficult to determine in exactly what manner the water occurs under us. The Geological Survey gives no account whatever of the position of the strata in the city further than that it is the most chaotic jumble to be found in the State. This is due, it is said very indefinitely, to the "influence of the east and west line of depression by which the 'Golden Gate' has been opened." However, the strata which have been covered up by the drift of sand, correspond to strata found on the east slope of the Santa Cruz mountains in Santa Clara valley. In this valley the east and west compression which forced up the mountains elevated the strata with considerable regularity, so that they dip gently to the east. If this had been the case in our vicinity, we should expect the strata in the region represented by our map to dip in the same general direction. But the "influence of that break" has interfered with this. Figs. 4 and 5 show a general inclination of the surface

around, a fourth, 75 feet deep, flowed over the surface. If there are channels underneath us in which the water runs, when and just how they were produced does not appear. They do not always correspond to present channels. The last named case is a proof of that, for the well that struck rock at 16 feet is very near the mouth of an old creek, as will be seen by referring to Fig. 2. Again, a well in the mouth of Islais creek, south of the city, proved a failure at about 140 feet. Wells very near the lagoon which puts up towards Tamalpais, back of Sausalito, in Marin county, where the formation is, we believe, the same as on our peninsula, also were failures. It would certainly be interesting to have some map of the country when the channels of these now underground streams were scoured out. In some views it looks more as though the successive layers of gravel, clay, sand, etc., had been pressed up into a series of waves and that the water seeks now the troughs of the waves.

The interesting and unanswerable question now arises as to where the water comes from. Most of it, in the deeper strata at least, must be admitted at or near the outcrop. This outcrop may be around the bases of the hills and covered up in the large tracts of sand towards the beach. It has been estimated that 15,000,000 gallons of artesian water is pumped daily from San Francisco wells. That would make 5,475,000,000 gallons per year. If we consider the whole surface of the county as catching water for our wells (which is not the case) and take 23.3 inches as the average yearly rainfall, we would have a supply of 17,809,000,000 gallons per annum, or three times as much as is now used. But even considering that this much were furnished, it seems impossible that even the amount now obtained could be made available. For the artesian water is under pressure. Moreover, it has connection with the bay, as is proved by the effect which the tide has upon the level of the water in wells near the shore. This would indicate a constant flow into the bay. And it seems highly improbable that even the present supply could be sustained if the catchment surface is only our own neighborhood. It may be that not all the strata outcrop under the bay, in which case some of the supply might come from the other side. Ignorance of the relations of the strata on this side to those on the other prevents any attempt at judgment on this question. A well at Oakland point, 206 feet deep, is affected by the tide and from this it may be surmised that if strata extend unbroken from this side to the other they must dip very much to the east.

In the next we will continue this, giving, if possible, a figure explaining the effect of the tide on the artesian water, and perhaps further profiles. We invite discussion of the subject of artesian wells and desire all available information.

Large Farms Elsewhere.

California does not monopolize all that is massive in agriculture. Many have heard doubtless of the Dalrymple farm in Dakota and with be interested in the following description of this year's harvesting upon it, as written by a correspondent of the Chicago Times.

The area of ground under crop this year is 13,000 acres. Next year the area will be increased to 20,000 acres. The spring wheat was sown the latter part of March and the forepart of April. The first of it was cut July 25th, and 12 days after that the work of the reapers had been finished, and miles upon miles of wheat shocks covered the plains. In bringing this crop to perfection Mr. Dalrymple has employed 500 head of horses and mules, 80 broad-cast 8½-foot seed-sowers, 160 14-inch plows, 200 steel-pointed harrows, 15 40 inch cylinder threshers and cleaners, 15 10-horse steam engines, 80 Walter A. Woods' self-binding reapers, and a force of about 400 men. These 80 machines, when in motion, cut and bound with wire 1,000 large bundles every minute.

Threshing was begun a few days ago, and, as I stood in the midst of this stubble to-day and watched the smoke curling up from steam machines, miles upon miles away, and fancied that they looked as vessels look when steaming far out over the lake in front of Chicago, I thought to myself what a magnificent "desert" this is! Near by me was a Superintendent who was talking through a telephone to another Superintendent some three miles away, near him sat an operator, who was sending a dispatch to another part of the farm.

Mr. Dalrymple said that he expected the yield to average 25 bushels per acre, which would give a total of 325,000 bushels, worth just that many thousand dollars, two-thirds of which would be net profit. It is all No. 1 wheat, and Mr. Dalrymple said he had just declined an offer by the Millers' Association of Minneapolis of 92 cents per bushel for 80,000 bushels. He is shipping from his farm to Duluth, and thence to New York, 20 cars of wheat every day.

A VALUABLE deposit of onyx has been found in Sonoma county, and it is the more valuable because it is small. Some specimens exhibited in San Francisco are pronounced superior to anything of the same kind yet discovered on this coast. The striations and shadings are remarkable for their variety and beauty, and make the onyx very suitable for ornamental purposes

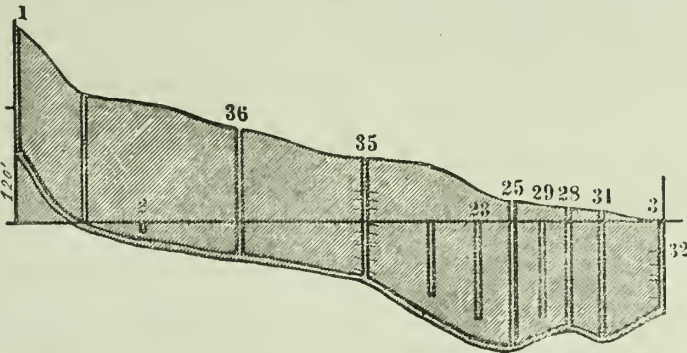


FIG. 4. PROFILE FROM SCOTT AND CLAY TO FOLSOM AND SIXTEENTH.

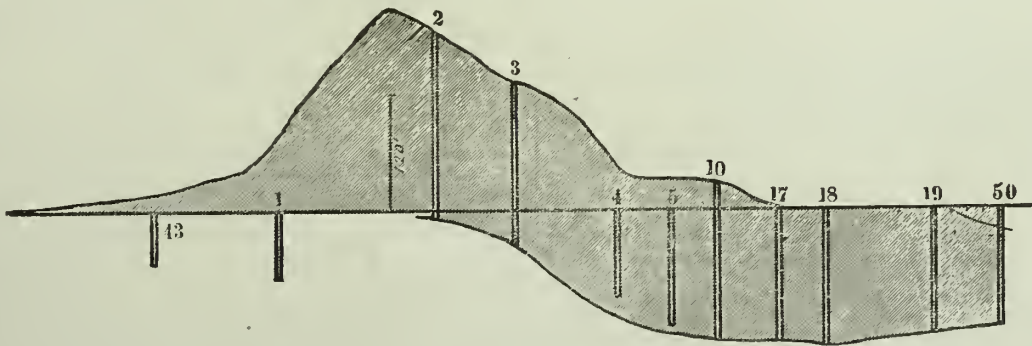


FIG. 5. PROFILE FROM SCOTT AND LEWIS TO BRANNAN AND SIXTH.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

The Relations of Government to Agriculture.

At the recent meeting of the National Agricultural Congress in New Haven, Conn., an able paper was read upon this subject by Prof. W. H. Brewer, of the Sheffield Scientific School of Yale College. We make the following extracts:

How Our Agriculture has Developed

The theoretical principles underlying our governmental action is to foster the production and accumulation of wealth by giving the widest liberty to individual action and individual enterprise that is compatible with the safety of the small property-holders and the poor. Such being the case the agriculture of the country has been developed by private means, government aid in any form being given but sparingly and mostly indirectly. We are total strangers to many of those governmental acts by which other nations have fostered, modified or improved their agriculture. But as the area of tillage has grown, population becomes more dense and competition more severe, production more systematized; and more than all these, as the unoccupied fertile land to be had for the asking has become more distant from the great markets, there is a growing wish to have our government give greater and more direct aid to agriculture, as it has long done to commerce, manufacturers, railroad building, and, indeed, to everything that uses large amounts of capital controlled or managed by few persons. We are all fed from the soil, and a free people must be well fed. No government is strong enough to stand upon the votes of hungry men, and therefore the perpetuity of our free government depends upon keeping agriculture in the front rank. Late years various causes have so modified, improved and developed other industries, that the position of agricultural production, relative to that of other productions or sources of wealth, have been changed, and now it must have aid in ways, or to a degree it has not hitherto had, or the balance will be still more disturbed. A loud complaint comes up from the whole land about hard times, and everywhere we hear the story of over-production of manufactured goods, brought about by new machinery, new methods, new applications of science and new discoveries—that manufacturing and mechanical industries fostered by government and aided by science have grown much faster than agriculture has done, and that this has been in part produced by legislation specially fostering such industries. To get back again to a better balance of power in the industrial world, agriculture must now, and in the future, receive more of the attention and aid of the government than it has heretofore. This should not interfere with the wide liberty heretofore allowed to individual effort and individual enterprise. The government aid should be largely directed to the protection of the right of the farmer, the solving of such problems as individual enterprise cannot or will not reach, and to the dissemination of information among the people. This is in accordance with our agricultural traditions and our political organization, and I believe that in the end this will be the most effective as well as the most profitable aid.

Some Things the Government Should Do.

Upon the general government most undoubtedly devolves the duty of doing certain necessary work for the general good, but which lies outside of special individual profit. In this catalogue belongs the investigation of insects injurious to crops, such as the locust of the west, the various wheat parasites of the north, the cotton worm of the south, and others which readily engender themselves to each of my hearers. In the same catalogue belongs certain extensive and destructive diseases of crops, such as the potato rot. Also various contagious and epidemic diseases of live stock. Such questions as these, involving vast economic interests, can only be profitably and successfully worked up by scientific methods, and if cures are ever found it will be through scientific study. But, as they now stand, they are questions of economic rather than scientific interest, and they will never be thoroughly worked up by scientific men entirely at their own expense, so long as more fascinating problems of scientific research invite their labors at vastly less cost of thought, time and money. Moreover what scientific man or society in this country has the money needful for any such great work. Nor have colleges and schools. In the cases mentioned individuals and schools or societies at their own expense have already done about all they can do with such means. Upon the government the duty now devolves, and of late most valuable investigations have been made in such directions, and perhaps the main reason why the general government has not done much more, and long ago, has been because of the unfortunate complications arising out of the connection of such government work with political rewards and party spoils. In this respect we hope that a better day has dawned upon our country. The collection and publication of agricultural statistics and official estimates, and the dissemination of certain kinds of agricul-

tural information, belongs rightly to the agricultural department of the government.

The Regulation of Corporate Powers.

The most prominent feature of the business world to-day, is the organized action of capital to do what is beyond the power of individual enterprise. To a great extent private corporations now do what in other ages would have been by government only, if indeed done at all. Corporations can dig canals, build railroads, open highways for commerce which governments themselves dare not attempt. Manufacturing establishments are built on a gigantic scale, the beneficent intent to mitigate the losses caused by fire and even death is made a business, and insurance companies managing enormous sums of money. National finances even, are not stronger than combinations of banking corporations. Our cities are lighted by gas companies, and often the very water to drink is supplied by water companies holding franchises. Such organizations of capital are now a necessity. They have gone along with our modern civilization and have become an essential factor in its future growth; without them we would retrograde.

But with the growth of any good thing an attendant evil always develops with it, a correlation of growth as inevitable in the organism of society as in physical organisms, and how to repress and control such evils which are correlated with essential or durable benefits has been the great political problem of the ages.

The Conflict with Monopolies.

Now I believe that the coming conflict in our civilization will be a fight of the people to better define and limit the power, and prevent or diminish the oppressions of organized capital, or at least certain kinds of great corporations; of combinations of capital founded on legal enactments created by laws made by the people chosen by representatives, managed and controlled by the strongest business intellects the world now knows; defended by the most eminent lawyers whose services are in the market. We all of us feel the power of the corporations, sometimes most uncomfortably so. We all of us see individual cases of wrong and oppression by them, sometimes very definite, but often is vague, yet not the less actual. We see that some one or some class may be oppressed without being able to either right the wrong or to lay the blame on any one man whom we can call to account.

Our laws, our traditions and our instincts are for the protection of our property and earnings from violence. We have officers to catch and courts to try and prisons to punish the thief, the burglar and the robber with almost vindictive severity, but we see a life's earnings go through a scoundrelly insurance company or a dishonest railroad company, and we are powerless either to redress our wrongs or to punish the oppressors. We all feel that as yet there is no practical remedy applied.

We feel, too, their strong hand (and not always a gloved hand either) in every State legislature, and mutterings all over the land show a wide-spread fear that even now their power is more than a match for the national government itself. We see this as a great cloud rising all along our political horizon with ominous portent of a coming storm.

As I have said, I believe this will be the next great conquest in the general history of progress. It may not be so bloody as some that have gone before, but it will be a hard and bitter struggle. That time will solve it, and the race take a long step ahead, I believe when such organizations shall have their powers so defined and controlled that they will be, as they ought to be, the beneficent servants rather than the cruel masters of the producers.

The transportation matter I consider is but one element of this greatest question, which branches out into many directions, complicated as it is, and will be with social and political theories pertaining to politics, labor, finance, governmental function and what not, the whole forming a problem which will tax the powers of civilization to solve, a problem too vast for me to throw any valuable light upon. I have therefore merely stated the question, but attempt no solution, and offer no suggestion. It is a problem for the people to solve, but too great for one to answer how.

Sacramento Business Association.

At a late meeting of the Grangers' Business Co-operative Association of Sacramento Valley, the following Directors were elected for the ensuing year: Geo. W. Hancock, Sutter; Wm. Johnston, Franklin; Geo. Gray, Galt; N. Mertis, Roseville; E. G. Martin, Rountree Station; A. M. Plummer, Brighton; L. H. Fassett, Florin; Dan. Flint, Geo. Rich, Sacramento.

The Board at the following meeting elected G. W. Hancock, President; Wm. Johnston, Vice-President; Geo. Rich, Secretary; L. H. Fassett, Treasurer.

In Memoriam.

NEWCASTLE GRANGE, No. 241, Placer county, Cal., October 12th, 1878.

WHEREAS, For the fourth time since the organization of this Grange, death has entered our ranks and we are called upon to mourn the loss of one of our members by the decease of our friend and associate, Sister MARTHA BROWN, and of the still greater loss sustained by those who were nearest and dearest to her, therefore be it Resolved, That, as a just tribute to the memory of this departed, to say that regretting her removal from our

midst, we mourn for one who was in every way worthy of our respect and regard.

Resolved, That we sincerely condole with the husband and brother of the deceased on the dispensation with which it has pleased Divine Providence to afflict them; and we commend them for consolation to Him who wills all things for the best and whose chastisements are meant in mercy.

Resolved, That our charter be draped in mourning for 30 days, and a copy of these heartfelt testimonials of our sympathy and sorrow be sent to the husband of our departed sister; also to the county papers, the PACIFIC RURAL PRESS and the California Patron for publication. (Mrs. J. Threkel, Julia S. Rice, J. D. Mitchell and G. S. Nixon, Committee.)

AGRICULTURAL NOTES.

California.

COLUSA.

HOME PRODUCTION.—Sun, Oct. 19: We got some hams not long since of our neighbor, J. K. West, which are much better than the imported hams, and we could but wonder how it is that such things are brought from the Eastern States here. It costs much less to raise a hog here than it does in Illinois, and it costs but little more to make the bacon. It has got to be fashionable to call for the Chicago sugarcured hams, and they bring several cents more on the pound, rags, brown paper, dirt and all, than Mr. West could get for his hams, neat and clean. We bring cheese, butter, eggs, etc., from the East, when a cow or a hen can be fed here for about half the money it requires in the East; and yet with all these things coming here, men sit back and swear that there is nothing to do in this State! It strikes us that men who have the ability to make as good hams as those put up by Mr. West, ought to try to make the use of their hams more fashionable than the Chicago brand. With our alfalfa fields, in which a hog can be raised up to a year old for one cent a pound, we ought to be sending hams to Chicago, instead of importing them. There are some things that must be changed around very greatly before California can become a prosperous agricultural State.

FRESNO.

RAIN.—Expositor, Oct. 16: On Monday a regular winter storm prevailed in this valley. The rain came down as steadily as in mid winter, and in the afternoon a cold wind accompanied it, which extended far into the night. The storm was untimely, and will result in considerable damage to unthreshed grain in portions of the valley, besides seriously injuring the dry feed. This latter difficulty, however, will soon be overcome, as there has been sufficient rainfall to bring up the grass, and the earth being yet warm, its growth will be rapid, and green feed will soon be abundant, at least for sheep. So heavy a rain storm is unusual at this time of the year.

LAKE.

LAKE COUNTY WOOLS.—Bee, Oct. 17: It is a fact well known to our larger producers of wool in this county, that no wools in the State of California are more sought after, or control a higher price than "Lake county wools," yet it never commands as high a price at home as either Mendocino or Humboldt wools, and why? We answer, simply because the market reports of the city do once in a while give Mendocino or Humboldt quotations in advance of the valley wools, but never mention Lake in their reports; and when the buyer comes among us, he offers a depreciated price, and refers us to the reports of valley wools to prove to us that he is giving all the market affords. We answer no, and refer to the Mendocino and Humboldt quotations, but are told by the shrewd buyer that such prices do not apply to Lake county, for the reason that Lake wools are never mentioned. We believe that this is an unintentional wrong that has been done us by the city commercial reporters, and desire now to call their attention to the matter that in the future we may have a fair deal with our produce.

MENDOCINO.

RAIN AND GRASS.—Ukiah Press, Oct. 19: The rains of the past two weeks have done much good, instead of harm, as was predicted. It was thought the first rains were just enough to injure the old grass and not enough to bring on the new. But in spite of prediction the new grass has made its appearance, and is said to be about three inches long on the ranges. The valley lands are in good condition for plowing, and we hear of several farmers who intend starting their teams as soon as their work will let them.

SACRAMENTO.

EDITORS PRESS:—The corn crop in the Cosumnes is very fine and plenty. The market price is low. The late rains is stirring up the farmer for fall work. Crops are being put in on the different islands previously overflowed. All hope that the work now underway will accomplish the good in hand.—Geo. Rich, Sacramento.

SAN MATEO.

STILL THRESHING.—Times and Gazette, Oct. 19: Two more threshing machines started from Redwood for the coast side of the county on Tuesday, which will make nineteen at work over there. The outside of the stacks has been pitched off that were wet during the rain of Monday, they have dried very rapidly in the beautiful weather since the rain and work is going on as lively as ever. It is estimated that threshing will be completed in about two weeks.

SONOMA.

WINE WITHOUT CRUSHING GRAPES.—Healdsburg Enterprise, Oct. 19: Parties interested in wine making should visit Bloch & Colson's

winery, 2½ miles north of Healdsburg, on the Dry Creek road. The establishment is of 20,000 gallons capacity annually, but its completeness, conveniences and cleanliness are worthy of special attention. The grapes, after being separated from the stems, are placed in large tanks and allowed to ferment, which causes the grape skins to burst and the juice escapes. The grapes are not crushed or mashed in any way, as in usually the case, fermentation causing the skins to burst better and more evenly than any other process. The juice is drawn from the tank when the grapes are placed in a press and every drop of juice extracted. The wine has none of the bitter taste found in many wines, which is caused by crushing the seeds when the grapes are mashed.

TULARE.

RAIN.—Delta, Oct. 19: We understand that the rain, last Monday, did considerable damage to grain, hay, corn, beans, and other crops in the Mussel Slough country. Quite a number of farmers, being unable to get machines to do their threshing, have had their grain stacks considerably damaged, and owing to the difficulty of threshing damp straw they may not be able to to have it threshed this year, unless we have a long spell of dry weather. Considerable Egyptian corn that was harvested and lying in bundles on the ground is somewhat damaged. The Indian corn has not yet been harvested.

YUBA.

VIOLATING THE GAME LAW.—Appeal, Oct. 19: We are informed that the amendment to the game law passed at the last session of the Legislature which prohibits the killing, selling or offering for sale any female deer, is being constantly and generally violated throughout the State. All deer brought into market are now beheaded and all signs of the animal's sex removed, the reason being to avert the suspicion which would be caused by bringing in portions of the animals with the horns and other indications of the male deer. This is of course done by the hunters before bringing the game to market, and it is probable that the generality of dealers are innocent of all knowledge of wrong, but it cannot even be hoped that all are. There are only two plans to be pursued which can remedy this violation of the law at present. One is for the dealers to refuse to purchase an animal so mutilated as to conceal its sex, and the other is for the police authorities of our cities to employ an expert, whose business it shall be to inspect the markets and detect dealers offering the meat of does for sale. Let this matter be attended to without fail.

SHORT HORN BREEDERS' MEETING.—S. F.

Lockridge, Secretary, informs us that, owing to the prevalence of the yellow fever in the South, the convention of the American Association of Breeders of Short Horns, which was announced for the 30th of October, at Nashville, Tennessee, is postponed until further notice.

THE VENTURA BEE PICNIC.—We are informed

that, by order of the Committee of Management, the beekeepers' picnic at Scenega has been postponed for one week, to give further time for those at a distance to attend. The date for beginning will be November 1st, and the picnic will continue two days.

THE PIONEER COTTON GROWER.—Colonel J.

M. Strong, the gentleman elected to fill the vacancy in the Constitutional Convention created by the death of Judge Hardwick, is one of the two brothers who devoted so much of their time to cotton growing in this State. Their experiments amply demonstrated that there are localities in the State where cotton culture can be made a success. Colonel Strong confined his operations to Merced county, but his reward was by no means commensurate with the capital and labor invested. There was no home market for his raw material, and the expense of exportation was too great to make the business profitable. The Strong brothers look forward to the day, however, when by the erection of cotton factories in this State, cotton culture will become a great industry, and we think there is hardly a doubt of it. Then the experience of Colonel Strong, if he should survive long enough, will be made available by the planters to some advantage.—Call.

STEAM ROAD WAGON.—O. A. Olmstead exhibited

to us this week, says the Sutter Banner, the model of a steam road wagon and cultivator, his own invention, which appeared to us to be the very best thing for the work for which it is intended. The inventor, who is comparatively a poor man, is in search of some capitalist who will invest money in the machine. It appears to us that there is a fortune in the machine, and we have no doubt the man needed will be found. The model can be seen at the Half Way house, Marysville.

THE RURAL IN THE SOUTHERN STATES.—The

California Agriculturist and Artisan has been amalgamated into that excellent paper, the PACIFIC RURAL PRESS of San Francisco. To those who are engaged in Southern agriculture, this paper is particularly valuable, being full of just such information as they require, and most ably conducted and edited. It is published by Dewey & Co., price \$4 (if paid in advance, \$3.50) per annum.—Florida Agriculturist.

News in Brief.

THE Sacramento river is rising.
FROST near Memphis, Oct. 18th.
FANATIC riots in Mexico are reported.
THE Petaluma Woolen Mills have been started.

THE wheat crop may exceed 400,000,000 bushels.

THE oat crop will probably somewhat exceed last year's.

THE Russian army lingers 100 miles from Constantinople.

COTTON factory, at Chattanooga, Tenn., burned on Oct. 17th.

THE Santa Clara county fruit crop is estimated worth \$2,800,000.

OCTOBER cotton crop returns, at Washington, indicate a yield of 5,000,000 bales.

THE British ship, *City of Dublin*, stranded on the Columbia river bar, Oct. 18th.

THE balance sheet of the Bank of Glasgow, shows a loss of £5,190,983.

THE outturn of the corn crop will not vary much from 1,300,000,000 bushels.

THE Russian Envoy to the Afghans, returns with an Afghan Embassy to the Russians.

THE steamer *John Bramhall*, with war material for Turkey, wrecked near New London.

A RETURNED miner from the Snohomish gold fields reports the alleged discoveries a fraud.

GENERAL GRANT is visiting Spain, where he has been most cordially received by King Alfonso.

IT is said that the Rothschilds have agreed to loan Egypt \$30,000,000 to clear off the floating debt.

THIS season large quantities of Napa county grapes will be shipped in refrigerator cars to the East.

DURING the rage of the yellow fever, 25 ministers have died at their posts in the southwestern cities.

OUT of nearly 2,000 turkeys raised by him this year, C. Rucker, Upper Pope valley, lost about 800 by roup.

THE whaling bark *Susan*, of New Bedford, was capsized in a hurricane, and 22 out of the crew of 25 were drowned.

CAPTAIN EADS estimates at as high as \$200,000,000 the diminution in the amount of trade caused by the yellow fever.

A MORE pacific state of affairs has never been known to exist on the western side of the Republic of Mexico than exists just now.

THE steamer *Dominion*, Montreal to Liverpool, lost overboard in heavy weather 514 sheep.

THE *Victoria*, from Boston, lost 100 cattle.

IT is expected that the second dividend of 15% will be paid to the depositors of the Farmers' & Mechanics' Bank early in December.

AN inundation in the valley of the Bormeda, in Piedmont, swept away houses and bridges and reduced many families to utter destitution.

THE Government is suing the Central Pacific Railroad to recover 20,085 acres of land in Colusa county, illegally entered and claimed.

THE Colorado potato beetle, the chintz bug and another insect have greatly damaged the potato crop in the neighborhood of Verde, Arizona.

IT is reported that England, Italy and France, will not recognize Servian independence until the civil and political equality of the Jews is proclaimed.

SOME wretch emptied the contents of two bottles of strychnine into the troughs from which G. A. Collins, of San Jacinto, waters 2,500 sheep.

SELLING MOHAIR.—The latest news in this important matter we gain by way of the Sonoma Democrat, to the effect that "Messrs. Falkner, Bell & Co., of San Francisco, through whose hands most of the product from the few herds of goats scattered over California has passed, have recently employed a wool grader from the East, who has had large experience in the grading and working of mohair. As the raising of the Angora goat is becoming more general throughout the State, those who are engaged in the business will hail this news with pleasure, in view of the fact that heretofore prices have been very much impaired for the want of experienced persons to grade and handle the wool. This difficulty having been removed, producers of mohair in the State are confident of getting a return for California's product equivalent to its true value." We hope so. That is just what the goat industry needs above all things.

VEGETABLE WAX TREE.—Mr. Henry Loomis, who has an interesting article on this plant in another column, has shown us specimens of a Japanese candle made of the vegetable wax, and a lump of the wax as it is prepared for export to this country. The tree and its products are certainly very interesting, and will attract the attention of all who are on the lookout for curious and valuable foreign plants to introduce on their grounds. All we have read of the plant leads us to approve it as worthy of trial for its use and beauty. The plants are advertised in another column.

NORMAN PERCHERON.—We have received from M. W. Dunham, of Wayne, Illinois, a copy of his catalogue for 1878, which is well written and contains much useful information concerning this breed of horses. Some of the best Normans in this State came from Mr. Dunham's importations and many will be interested in his new catalogue.

Monterey County Fair.

The Monterey County fair at Salinas City was a gratifying success according to all accounts we have received. The following are the leading portions of the premium list as printed by the Index:

Horses.

Roadsters—J. C. White, stallion, 4 yrs old, Phil Sheridan; P. Kilburn, mare, 4 yrs old, Birdie; J. C. Storm, mare, 4 yrs old, Dolly Vernon.

Horses for all purposes—James Delaney, stallion, 3 yrs old, Vermont, Jr.; Mr. Plau's Eureka, sp. prem.; A. J. Ougletree, stallion, 2 yrs old, Young Defiance; W. W. McCoy, stallion, 1 yr old, Boston Jim; Guadalupe Anzar, sucking colt, Emerson Chief; R. Corey, mare, 3 yrs old, Dolla; Guadalupe Anzar, mare, 2 yrs old, Ella; William Brumwell, mare, 1 yr old, Giraffe; W. W. McCoy, mare, 4 yrs old, Tiger Whip; W. W. McCoy, mare, 3 yrs old, Lady Griffin.

Draft Horses—Wm. Ford, stallion, 3 yrs old, Fullon; H. Corey, mare, 3 yrs old, Rosa; W. W. McCoy, mare, 2 yrs old, Boxer.

Carriage Horses—J. D. Carr, span carriage horses, Nig and Brick; J. G. Sanchez, single buggy horse Billy Boyce.

Sweepstakes—Wm. Ford, stallion, of any breed or age, Fullon; James Delaney, 2d best stallion, of any breed or age, Thomas Elmo; J. C. Storm, mare, of any breed or age, May Queen; James Delaney, 2d best mare, of any breed or age, Ida May, Jr.

Families—Family of mares and colts, James Delaney, Ida May, Jr. and 5 colts; J. D. Carr, 12-yr old filly and 3 yearling colts.

Cattle.

Durhams—All premiums awarded to J. D. Carr. Graded Cattle—A. B. Smith, bull, Tom; James Delaney, cow.

Herd of Cattle—J. D. Carr, best herd of cattle, one breed, Duke of Gabilan and 5 cows.

Sheep.

All premiums to J. D. Carr for Merinos, Southdowns and sweepstakes.

Swine.

Wm. Ford—Boar, of any breed, Essex; J. D. Cochran, sow, of any breed, Poland; B. S. Moody, pair pigs, Berkshire, Dexter and Maud.

Poultry.

T. G. Harris—Irish red games; W. H. Webb, Brown Leghorns, Sumatra games and white-crested Black Polish.

Agricultural Implements.

Bachelor Mfg. Co.—Windmill, Napa self-regulator; N. McLean, cultivator and harrow; M. H. Clark, improvement on grain sower; Sweepstake Plow Co., sweep horse-power; Brown Bros., brass goods and straw-burner engine.

Farm and Garden Products.

H. Corey—Potatoes; Wm. Ford, squashes; W. W. McCoy, citrons, melons, cucumbers, tomatoes; special mention of samples of wheat, barley, sweet potatoes and honey from the Laureles ranch; also commend J. R. Hebborn's exhibit of tomatoes, sweet potatoes and prickly pears; also squash and beets by B. W. Reynolds of Salinas; also cabbages and onions by Mr. Fenton; also W. Robson's exhibit of sugar beets and white Belgian carrots; Don de la Torre makes a fine exhibit of corn, pepper and tomatoes raised on reclaimed land near Salinas; also a box of yellow Danvers onions exhibited by Dr. E. K. Abbott, named by him the Giant Rocca of Naples.

Fruits.

James Waters—Collection, 25 varieties, apples; W. H. Wilson, collection, 12 varieties, apples; H. S. Ball, single variety apples; James Waters, collection pears, 16 varieties; Wm. Brunwell, single specimens pears; W. H. Wilson, peaches; W. F. Treat, quinces; Mrs. C. W. Cox, domestic canned fruits; Mrs. R. Corey, preserves and jellies.

Dairy Produce.

H. Corey—Best lot of butter. Only 2 samples of butter were exhibited—one by H. Corey and the other by A. Blomquist. The Committee report both samples as a credit to any dairy.

Nevada State Fair.

The following is the list of premiums awarded for live stock at the State fair lately held at Reno, Nevada. We compile our list from the Reno Journal:

Horses.

Thoroughbred Horses—Stallion, 4 yrs old, Ballot Box, A. B. Evans, Long Valley, Cal. (protested); Cousin Vic, M. C. Lake, Reno; 3 yrs old, Mark L. H. Schwartz, San Francisco; mare, 2 yrs old, Romping Girl, H. Schwartz, San Francisco.

Graded Horses—Stallion, 3 yrs old, G. E. Ballot, M. Graham, Winnemucca valley; 2 yrs old, Jim Barnes, A. Gibson, Reno; 1 yr old, Orphan Tom, A. B. Evans, Long Valley, Cal.; mare, 1 yr old, Maggie, A. B. Evans, Long Valley, Cal.; Nettie Graham, N. Graham, Winnemucca valley.

Families—Sire and 5 colts, Ballot Box, A. B. Evans, Long Valley, Cal.; Bourbon, A. K. Lamb, Reno.

Horses of all Work—Stallion, 4 yrs old, Signal Breed, J. Mayberry, Reno; Morgan, M. C. Lake, Reno; 3 yrs old, G. Nick, W. A. Morrison, Reno; 2 yrs old, Whiz, F. M. Cramer, Reno; 1 yr old, Dave, H. Whistler, Reno; mare, 4 yrs old, Lucy, L. Dean, Reno; 3 yrs old, Jessie, W. A. Morrison, Reno; matched teams, Pluck and Dojan, Chauncey and Buck, Edgar Ball, Lake county, Ogn.; gelding, 4 yrs old, Colonel, Edgar Ball.

Draft Horses—Stallion, 4 yrs old, Mose Adams, J. Holcomb, Reno; 2 yrs old, Bill, M. C. Lake, Reno; mare, 4 yrs old, Georgie, L. Dean, Reno.

Teams—Babe and Grasseye, E. Ball; George and Medge, E. Ball, prem. rec.; Dick and Joe, G. Dormer, Reno; Kit and Fannie, G. Holcomb, Reno; single gelding, 3 yrs old, Jim, M. C. Lake, Reno; Prince, M. C. Lake.

Roadsters—Stallion, 4 yrs old, Wasboe, A. K. Lamb, Reno; 3 yrs old, A. Ramont, J. Beach, Fort Klamath, Ogn.; Nicholas Nickleby, James Dyke, Reno; gelding, 4 yrs old, Coburg, E. Ball; Granger, B. F. Sheldou, Jansville, Lassen county, Cal.; Dandy, B. F. Leete, Reno; Tom Fox, D. D. Newman, Sierra Valley, Cal.; 2 yrs old, Tom Norcross, Reno; 1 yr old, Caroline Norcross, Reno; mare, 4 yrs old, Dora, B. F. Sheldou, Jansville, Cal.; 3 yrs old, Jessie Fremont, James Dyke, Reno.

Carriage Horses—Matched greys, Wm. Musgrove, Washoe county; Kit and Fannie, D. D. Newman, Sierra Valley, Cal.

Saddle Horses—T. W. Norcross, Reno; Wm. Appleby, Reno, Breckenridge.

Sweepstakes—H. Schwartz, San Francisco, Mark L.; stallion, A. B. Evans, Long Valley, Cal., Ballot Box, medal; any age or breed, J. Beach, Fort Klamath, Ogn., Altamont, rec. for medal; J. Mayberry, Reno, Black; F. M. Cramer, Reno, Whiz; G. Holcomb, Reno, Mose Adams; A. K. Lamb, Bourbon; mare, L. Dean, Reno, Lizzie, medal.

Cattle.

Short Horns—Bull, 4 yrs old, L. L. Ricard, Winnemucca, Arden; M. C. Lake, Reno, Mars Eight; E. C. Sessions, Reno, Clarence Fourth, A. B. Evans, Reno, Figagree; Col. Younger, San Jose, Red Thorndale; George Ulyatt, Washoe county, Grant; W. A. Morrison, Reno, Duke of Berrydale; 3 yrs old, W. A. Morrison, Reno, King David; Col. Younger, San Jose, Airdrie Thorndale; John Guthrie, Winnemucca, Humboldt Chief, yearling; B. F. Leete, Reno, Second Duke Home Forest; E. C. Sessions, Reno, Orphan Boy; cow, A. Banta, Reno, Lydia Jane; 4 yrs old, A. Banta, Reno, Lizzie Nick; M. C. Lake, Reno, Rose; E. C. Sessions, Reno, Phyllis Moore; E. C. Sessions, Reno, Sarah Lochane; W. A. Morrison, Reno, Forst Rose; Col. Younger, San Jose, Cal., Gem; Col. Younger, San Jose, Cal., Rosa Nell; George Ulyatt, Washoe county, Nevada, Kate Hays; 3 yrs old, Dutch Girl No. 6, E. C. Sessions, Reno, Nevada; W. A. Morrison, First Thorndale Rose; Col. Younger, First Rosa Nell; Col. Younger, First Golden Gate; Col. Younger, Dollie; Geo. Ulyatt, Julia; cow, 2 yrs old, B. F. Leete, Oxford Beauty; B. F. Leete, Rosan Maggie; A. Banta, Carrie; George Alt, Alice; Col. Younger, Dolly Thorndale; yearling, B. F. Leete, Red Mary; B. F. Leete, Amelia Fifth; E. C. Sessions, Lady Maud; W. A. Morrison, Florence; B. F. Leete, 1 yearling herd, 4 heifers; E. C. Sessions, bull and 4 cows, herd; Col. Younger, herd, over 2 yrs.

Jerseys—Bull, 4 yrs old, W. A. Morrison; cow, 4 yrs old, Maude, W. A. Morrison; 3 yrs old, Katie, W. A. Morrison.

Graded Cattle—Bull, yearling, E. C. Sessions; cow, 3 yrs old, H. H. Hogan.

Sweepstakes—Bull, any age or breed, Airdrie Thorndale, Col. Younger, medal; cow, any age or breed, Phyllis Moore, E. C. Sessions, medal; bull, with 5 calves, Red Thorndale, Col. Younger, medal.

Yoke of Oxen—Brindle and Spot, J. B. Carr.

Sheep.

French Merinos—Rum, 2 yrs old, A. B. Evans.

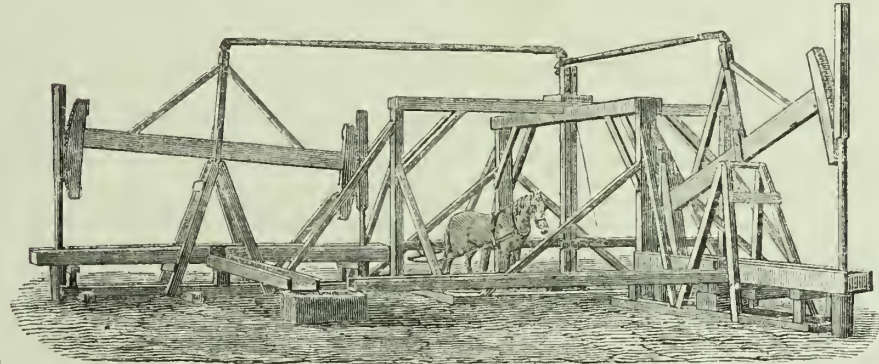
Spanish Merinos—John Guthrie.

Merinos—R. Kirman, 4 pens, 12 in each; R. Kirman, 3 lambs; R. Kirman, best lot, not less than 5.

Shropshire—John Guthrie.

Long Wool—R. Kirman, 3 lambs.

Cotswolds—R. Kirman, 5 lambs.



LAUFKOTTER'S CALIFORNIA HORSE-POWER FOR IRRIGATING

Coy, citron melons, cucumbers, tomatoes; special mention of samples of wheat, barley, sweet potatoes and honey from the Laureles ranch; also commend J. R. Hebborn's exhibit of tomatoes, sweet potatoes and prickly pears; also squash and beets by B. W. Reynolds of Salinas; also cabbages and onions by Mr. Fenton; also W. Robson's exhibit of sugar beets and white Belgian carrots; Don de la Torre makes a fine exhibit of corn, pepper and tomatoes raised on reclaimed land near Salinas; also a box of yellow Danvers onions exhibited by Dr. E. K. Abbott, named by him the Giant Rocca of Naples.

Grades—John Guthrie, yearlings.

Goats.

Angoras—All premiums awarded to Hall & Harris, of Hollister, San Benito county, Cal., and C. P. Bailey, San Jose, Cal.

Poultry, Etc.

A. S. Fitch—Dark Brahmas; C. Reed, White Leghorns; G. C. Hill, Houdans; M. H. Starling, Black Brahma Royal Games; M. H. Starling, games and variety; L. M. Meder, F. H. H.; S. S. Fitch, Plymouth Rocks, ducks, Emden geese, trio of fowls of any age or breed, 12 hens (dip); F. & C. Pollard, turkeys; Grant Rice, rabbits; Nettie Minke, Guinea pigs, dip; Brad Moore, Imperial ducks, dip.

A Horse-Power and Pumps for Irrigating.

Our illustration on this page shows Laufkotter's patent California horse-power and irrigating pumps. It was invented, and is manufactured in Sacramento. Our engraving is from a photo of his latest improvement, shown at the late State fair, i. e., a horse-power combined with four simple pumps of large capacity. At the fair it was operated easily by one horse, and furnished a large flow of water from near the surface. The pumps, of 8-inch diameter, give a long stroke of 5 feet.

Mr. Laufkotter, who has had a good deal of practical experience in making pumps and boring artesian and surface wells in Sacramento and vicinity, has lately engaged with the firm of Wm. Gutenberg & Co., proprietors of the Sacramento foundry, who will hereafter furnish special advantages in manufacturing and selling these pumps and horse-powers.

Parties wishing irrigating apparatus are invited to investigate thoroughly the advantages claimed for this pump and horse-power, by addressing Wm. Gutenberg & Co., Sacramento, for circulars and further information. As will be seen by advertisement in this paper, Messrs. G. & Co. also manufacture the Golden State ground roller and clod-crusher.

S. R. LIPPINCOTT, general agent for Boswell's pure-air heater, cooker and fruit drier, has removed his office from 307 Pine street, to room 4, Sherman Block, 606 Montgomery street.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING OCTOBER 8TH, 1878.

HYDRAULIC AND WIRE ROPE PUMPING SYSTEM.—William P. Barclay, Virginia City, Nev.

ONE-TRACK RAILWAY CARS.—David B. James, Visalia, Cal. ADJUSTABLE CENTER-BOARDS.—Dennis McColgan, San Francisco, Cal.

BUTTONS.—Albert Michelson, San Francisco, Cal. BUTTON FASTENERS.—Albert Michelson, San Francisco, Cal. TELESCOPE ATTACHMENTS FOR FIREARMS.—Chas. Slotterbek, Lakeport, Cal.

CHAIR BRACES.—Soven P. Sovenson, Rio Vista, Cal. HARVESTERS.—Wm. H. Foye, San Francisco, Cal. CHILD'S TABLE TRAY.—Charlotte Gillard, San Francisco, Cal.

BARLEY AND MALT DRIERS.—Gustav S. Reuter, Sonoma, Cal.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

The Averill Mixed Paints.

Now that the dust has been laid in most parts of the State, all those who wish to refresh and beautify their dwellings and outbuildings will begin painting. We doubt not we shall help some readers to a choice of materials when we state that we have heard nothing but praise of the Averill mixed paints from those in the country who have written to us about them. These paints have been advertised considerably in the PRESS, and we doubt not are known experimentally to hundreds of our readers. To those who have not yet used the Averill we can but say that our experience with it has been most satisfactory and such that would lead us to commend it to others.

The fact is that the manufacture of the Averill mixed paint is one of the most thriving and progressive of our local industries. Not only are larger amounts than ever before shipped to all parts of this coast and continually winning new friends by sterling quality and readiness for application, but the export of the paint to the islands of the Pacific, makes the Averill paint a promising item in our export trade. It is being shipped to Australia in considerable quantities. In the Sandwich islands it has been in use five years, and the shipments this year are six times as great as in any former year. This increase of demand after the complete test which has been made of the material is indisputable evidence of the satisfaction which the paint gives to its users.

To its long list of victories at fairs and industrial exhibitions the Averill paint adds a conquest at this year's State fair at Sacramento. Among other valuable qualities the committee awarded it the first place for the "greatest durability." This is, of course, a very strong point in a paint, for almost any material if skillfully mixed looks well at first.

The California Paint Company, who are the manufacturers of the Averill on this coast, make it to suit all purposes, from the outside painting of barns and bridges, or roof and sides of other buildings, to the exquisite tints for inside finishing. It is also made for painting wagons, and every other manufacture of wood or metals. We believe that any one needing paint for any purpose will do well to send to the California Paint Company, No. 329 Market street, S. F., for card of colors and prices of material suited to the purpose they require.

Wanted—Farms to Rent and to Purchase.

I have numerous customers in search of rural property daily applying at my office. Send full particulars. Address: A. Zeehaedelaar (formerly with Labor Exchange) Real Estate, Business and Employment Agency, No. 627 Sacramento street, San Francisco. (Furnishes all kind of farm labor at the shortest notice free of charge to employers.)

Woodward's Gardens were never more attractive than at present. Besides three lions already mentioned, six monster living alligators, several iguanas and a boa-constrictor have just been added. New stars are constantly engaged for the Pavilion exercises. Rates of admission as usual.

NEW MUSIC.—Oliver Ditson & Co., Boston, send us half a dozen bright pieces of music that are seasonable, and good to hear. In vocal music there are "Dew-drops and Roses," by Cooper and Pratt. There is, also, "Faithful Love," always a fine thing to receive; and, also, a real good, jolly Irish Temperance song, entitled: "Because I lift off drinking Whisky." For Piano, there comes the "Crystal Waltz," by H. C. Wilson; "Carnation," one of a set of easy pieces by Lichner; and a pretty and bright four-hand piece called the Cuckoo Polka.



Pace Implora.

Better it were to sit still by the sea,
Loving somebody and satisfied;
Better it were to grow babies on the knee,
To anchor you down for all your days,
Than wander and wander in all these ways,
Land forgotten and love denied.

Better sit still where born, I say,
Wed one sweet woman and love her well,
Laugh with your neighbors, live in their way;
Be it never so simple. The humbler the home,
The nobler, indeed, to bear your part,
Love and be loved with all your heart,
Drink sweet waters and dream in a spell,
Share your delights and divide your tears;
Love and be loved in the old east way,
Ere men knew madness, and came to roam
From the west to the east and the whole world wide;
When they lived where their fathers lived and died—
Lived and so loved for a thousand years.

Better it were for the world, I say—
Better, indeed, for a man's own good—
That he should sit down where he was born,
Be it land of sands or of oil and corn,
Valley of poppies or bleak northland,
White sea border or great black wood,
Or bleak white winter or bland sweet May,
Or city of smoke or plain of the sun,
Than wander the world as I have done,
Breaking the heart into bits of clay,
And leaving it scattered on every hand.

—Joaquin Miller.

Carmello.

[Written for the RURAL PRESS by EDWARD BERWICK.]

The antiquary has yet to unearth the archives of the San Carlos Mission; Padre Junipero having left no memorandum as to their whereabouts. Having thus no authentic clue by which to discover why the lovely valley of the Carmello received its euphonious designation from the Mission fathers, we may reasonably conclude that its sylvan "stillness and seclusion" forcibly pictured to the monkish-eye these pastoral scenes of Bible history in which Nabal, Abigail and David, Elijah, Ahab and the prophets of Baal performed their terribly real parts in the world's drama.

Possibly Padre Serro fondly proposed to himself the foundation of a school of prophets, who should out-Elijah Elijah, and the prophetic train who of old received their inspiration in the "forest of his Carmel."

Although we are not aware that the 19th century has upraised a single prophet in the Carmello, we are fully persuaded that much profit has accrued to many from a residence in, or visit to, that charming locality. Thither, then, we accompany our readers a short space.

Comfortably ensconced in a commodious vehicle, lunch basket well packed, and choice spirits (not alcoholic) accompanying, we turn our backs on Monterey hay, and ascend the pine-clad ridge which forms the Carmel divide.

Arriving at the summit of the first height, a gate to the right hand admits to El Pescadero rancho. Roads diverge almost at the gate. Those to the right lead to the pine woods, whose branching shadows protect the waxen-leaved, luscious-fruited huckleberry; and whose every pore emits that balsamic breath of healing, the peroxide of hydrogen, dispeller of contagion, re-invigorator of city-poisoned lungs.

The road to the left, down the incline into the Canada Onda, leads to the Pescadero house by a right turn; thence through the pine woods to the unique, picturesque weirdness of Cypress point, the Northern cape of Carmel bay. Bold, abrupt, granitic rocks, eroded, torn, toppled, polished by fickle waves, crowned with the sad, grecu cypress, whose twisted trunks, red with lichen or white with age, add to the fantastic "eyrieness;" gloomy shades in the dense cypress groves, whose somber depths sunbeams never fathom; masses of suowy sand, glistening in brightness, and edging the serene azure of the scarcely-lapping wave; all furnish an endless vista of delight to the artistic eye, to the nature-communing soul.

"Thou who hast given me eyes to see
And love these scenes so fair,
Give me a heart to find out Thee
And read Thee everywhere."

Returning once more to the summit of the divide, and journeying Carmelwards, half a mile of travel bring in sight Point Lobos and Carmel bay. Few pictures could be more lovely than the view to the right as we descend the hill. The pine-clad rocky prominences of Point Lobos extending far into the glittering sea; the willow-fringed Carmel river, calmly acquiescing in its summer, sand-bar captivity; the grecu pastures beside its still waters; the fast-falling ruins of San Carlos mission; the majestic storm-scarred pines and grassy meads in the immediate foreground, form an ideal landscape richly rewarding the persevering pilgrim.

The pursuer of the piscatorial art will find both salt and fresh water amply stocked; the latter in early spring affords abundance of salmon, while in summer and autumn, samlets (salmon fry) may be taken, surpassing the celebrated Greenwich whitebait. Although a large fish compared to the whitebait, they are equally marrowy and soft of bone, the whole melting in the mouth. Those brothers of the angle who hanker after trout must wend their way up

some of the branch creeks that course through the narrow canyons. Grasshoppers are the kind of "fly" to take them with.

At the foot of the Carmel hill, the road again forks. A closer inspection of the San Carlos mission may be had by taking the right hand road and turning down the first right hand side offshoot. This same main road crosses Carmel river, passes the rich alfalfa pastures of Joseph Gregg, and follows the line of an iron-bound coast, through rocky and romantic scenery for 30 miles.

Branch roads lead to the coal mines, the granite quarry, the Portuguese Carmel whaling settlement, redwood forests, groves of tan-bark oak, and endless objects of interest. Near the ill-starred rock "El Morro," is a second Portuguese whaling colony, and the fine ranch, El Sur, may be entered by a trail that connects with the wagon road. Dairy farms, stock ranges and arable lands devoted to potato culture diversify the route on the left hand; while to the right the ever-varying thousand-tinted sea, with wave and breaker, foam and spray, reflects the angry sky; or with glassy glitter and peaceful ripple smiles to the smiling azure and caressing sunbeam.

As the country through which this road passes is much "broken," the student of geology will find ample opportunity for the use of his hammer on rocks of multifarious epochs, including igneous and carboniferous. The amateur naturalist will encounter an endless series of rocky tidal pools, stocked with marine fauna and flora, from which an ample selection may be made for the home aquarium, sea anemones and echinoderms, hermit-crabs and abalones.

Being satiated with the pleasures of the shore, Carmel valley proper now sets forth its claims to engage our attention. In continuous picturesqueness and romance of scenery the Carmel bears some resemblance to those famous valleys of Derbyshire, England, the Dove and the Derwent.

The first few miles along the road are perhaps rather tame and uninteresting; but from the Sargent crossing to the Tassajara springs the wayfarer passes such a panorama of gems of landscape as would afford studies for an artist's lifetime. Roads arched in or overhung with wonders of willows and cottonwoods; sweeps of sandy river bed edged with the dark, glossy Oregon alder; stretches of the greenest of green sward, dotted with clumps of velvet-leaved sycamores and crimson-tasseled maples; groves of umbrageous evergreen oaks; beetling cliffs, stony steepes and quiet glens; dense forest and thick underbrush; haunt of grizzly and home of duck; rushing river roaring through the rocky ravines and trickling brooks gurgling through wooded dells.

Lovers of the pastoral will find here an Arcadia to their mind, only Phyllis may be attired in a style useful rather than ornamental, and her swain will appear in jackboots and overalls, and be armed with a pitchfork in place of dulcet pipe; should he be seen with a pipe it will be more probably for inhalation than exhalation.

Sportsmen have in this valley and its environs an ample field for "chasing of the wild deer and following of the roe," not to mention the lesser delights of quail and rabbit shooting. Grey squirrel and mountain quail are found in the less frequented districts.

Any pleasure-seekers who don't have a "good time," will probably have only themselves to thank; happiness having, now as formerly, its springs in the heart rather than in the surroundings.

BRAIN WORK AND LONGEVITY.—The oldest living chemist is said to be Michel Eugene Chevreul, a Frenchman, born August 31st, 1786, and consequently just entering upon his 93d year. He has been for many years a resident of Paris, where he still continues his studies, in full possession of his senses, the vigor of his mind being wholly unimpaired. The production and use of colors has been a specialty with him, and the durability of the colors in the Gobelin tapestry is said to be due to his discoveries, by which hundreds of persons have been enriched, while he, as usually happens, remains poor. Chevreul serves to corroborate an opinion often expressed—that of all the classes that habitually employ the brain, men of science live the longest.

NOTHING makes a man so in love with purity as purity. Many a man has been lifted out of debasing sins against which he has vainly struggled, by coming to know and love a pure, sweet woman. It is the sight of embodied goodness that makes us want to be good. Many a mother by the quiet usefulness of her life, fills her children with a desire to be like her that makes them in their turn unselfish. There are obscure men and women who hardly in their lives utter a word of conscious teaching, who, by their example do more to make people around them gentle and truthful and Christlike, than any preacher can do. It is not those who talk about goodness, but those who are good that are the light of the world.

CAPITAL AND LABOR.—"Property is the product of labor. It must be hewed out of the forest, plowed out of the field, blasted out of the mine, pounded out of the anvil, wrought out in the factory and furnace. Labor is at the bottom of it all, and the nation in which there are the most laborers, and in which labor is best cherished and cared for, must be the richest and most prosperous. Capital and labor are natural allies. When they work together both are enriched, when they are hostile or separated, both suffer."—Roscoe Conkling.

The Great Cow Case.

A Tale for Those Who Think of "Going to Law."

Rollins' cow, it seems, while feeding on the common, got through a place, alleged by the defendant to have been purposely left open, in the fence of McGlue's garden. She did some damage, but was driven out, and when McGlue remonstrated with Rollins about the predatory and incendiary tendency of his cow, Rollins replied with declamatory and unparliamentary language. Thereupon McGlue went up and sued him for trespass, and swore to push the case to the last extremity. McGlue's lawyer, Poddery, went right to work, and when Rollins heard about it, he got his lawyer, Hopkins, to bring a countersuit for conspiracy to entrap the cow.

McGlue then told Poddery to open out a second suit for damages done to eight fence railings and a post by Rollins' cow, and Rollins also made a fresh start in another suit against McGlue, in which he claimed \$15 for the ruin of his cow's horn by McGlue's grape arbor. This seemed to McGlue so audacious that he ordered Poddery to include in his claim the market price of four cabbages and a bunch of parsley that the cow ate. He said that he would have let them go as of no account, if Rollins hadn't proved himself such a conscienceless scoundrel.

But this last movement exasperated Rollins to such a degree that he went over and got old Mrs. Muldoony to make an affidavit that she saw McGlue milking the cow, while it was on his ground, in the wash boiler. Armed with this affidavit, Hopkins had McGlue arrested, and he was held in security to answer a charge of petty larceny.

McGlue was furious. He got Poddery to open out a new suit, based upon the fact that Rollins' cow had scared one of his children into fits, injuring the child's constitution, and involving large expenditures for medical attendance. But just as the constable was going to serve the notice, Rollins came in and swore out a fresh process against McGlue for damages done to the cow by McGlue's setter pup biting her in the rear hind leg, just above the ankle.

Poddery then told McGlue that the time had come for decisive action; that, unless justice was a mockery and human right a hollow sham, he must settle this man Rollins at once. So McGlue ordered a new suit against Rollins for destruction of his property in permitting his cow to rub the whitewash off of the corner of McGlue's pig-sty, and McGlue said he would carry the case to the Supreme court, if it should be necessary.

Rollins met this assault by putting in a demand for compensation for the hair lost by his cow by coming into collision with McGlue's pig-sty, and, at the suggestion of lawyer Hopkins, he added a sworn item, in which he showed that the digestion of the cow had been permanently ruined by the latching of the pig-sty, which was so loose that it came off when the cow nibbled it, and was swallowed.

When McGlue called to ask Poddery what should be done now, that eminent lawyer was out buying a house with the fees that had already accrued from the great cow case. Hopkins, at that moment, was paying off an old mortgage with his fees.

When Poddery came in, he said things had now reached a crisis. McGlue's clear duty was to throw himself upon his country, and to stamp out this fiend who was pursuing him with malignant fury.

After talking it over for an hour, Poddery took out the papers in another suit, which McGlue accused Rollins of breach of the peace in permitting his cow to wake Mrs. McGlue's baby, in the very crisis of the nuptials, by its "mooring;" and still another, in which McGlue claimed compensation for the brick which he heaved at the cow, and for the manual labor expended in the effort.

Rollins retaliated by arresting McGlue for corrupting the morals of Rollins' boy, Jim, by the use of profane and scandalous language while he was striving to eject the cow.

As soon as McGlue entered bail, he told the squire that he would call in the morning to enter suit against Rollins for permitting his cow to butt down McGlue's pig-pen.

Rollins overheard him, and at once made an affidavit, stating that the shock of the encounter with the pig-pen had given the cow brain fever, and so deranged her mind and unstrung her nervous system that she was now in the habit of coming homeward, up the hill, tail foremost, in such a manner as to excite general derision.

The two suitors left the squire's office together. As they passed through the doorway, Rollins jostled McGlue's elbow. McGlue jostled back again, and Rollins struck him. They clinched.

It was an awful combat, and each was taken home on a shutter and put to bed.

A week later, friends brought them together and made up the quarrel, and the suits were all withdrawn.

A fortnight afterward, Poddery distrained McGlue for his fees, and left him an empty house.

On the same day, Hopkins sold Rollins out, cow and all, and he had to begin the world clean over again.

Both of them think they will be calmer when they have another cow case.—*American Dairyman.*

Self-Denial.

[Written for the RURAL PRESS by AGNES.]

Dame Ambition is continually struggling for the supremacy in my household reign, said a farmer's wife, mentally, as she swept and dusted her scantily furnished rooms, with but little hope for any improvement in their appearance for the coming year, beyond what the regular application of neatness and care would give them.

True, they are furnished with abundant sunshine, fresh air, warm bed-clothing, papers, books, hanging-baskets, etc. Yet, the said dame never satisfied with present means, whippers in my ears: "You need a new carpet for your own sleeping room, to make you comfortable this winter, and a few more pictures to brighten your walls and thereby add to the cheerfulness of your home."

She reminds me that the stair carpet is almost threadbare, that the outside of the house would be made to look like new, if one or two coats of the Averil mixed paint were applied, also that the books are stored on closet shelves and on tables, receiving the dust instead of occupying their natural and inviting position in a simple but neat bookcase.

How my brain reels from trying to gratify her "whims" (as husband calls them) or rather from striving to know how best to use the little means I have to dispose of, to best advantage for my family. How I wish Miss Contentment would step in, and with her philosophy and hopefulness assist me in brightening up the surroundings we already have.

I dread to dismiss the companionship and influence of Ambition from my household, she has been with us so many years, and her energy and perseverance have won our deepest regards. But how can I bear this continual strain between what would be desirable and what cannot be had? Yes, my mind is made up; I will at once quietly and politely discharge the dame although her nature is so much in keeping with my own, and urge Miss Contentment, who is always satisfied with humble surroundings, to take up her abode with us for the present trying times.

Her peaceful companionship will make the dark days brighter, and the mother-face (the picture most looked upon by husband and children) by the spring-time will wear a happier smile, for something will have been devoted to musical instruction in the family, since there are already under the "roof-tree," little souls with little voices calling loudly for food in this direction which must be gratified, if the old chairs have to be glued and re-glued, again and again before better ones can be substituted.

Santa Clara, Cal.

What is Done With the Time Gained.

The progress in domestic conveniences and the employment of men in dairywork has taken that much of heavy, hard work off from the hands of farmers' wives. Has it given them so much more leisure? and, if so, what do they do with it? Do they read more? Do they study political economy preparatory to the great duty that will be theirs in time, viz, to vote? Have they more pianos and family organs, and is music more largely cultivated than formerly?

Yes, they do read and think more; but what is more apparent than all, they cultivate flowers very much more than was the case even ten years ago. Now, in driving through the country, you scarcely see a farmer's house too humble, but there are vines clambering over its windows and porches; and in the windows and on the piazzas of many you see a rare and inviting display of native and exotic plants, and this, in my opinion, shows a soul growth that is most encouraging. The narrowed lives of the farmers' wives and daughters have now found expression for the latent esthetics that was in their souls, and this will prove but the beginning of awakening possibilities which may possess and shape for the further embellishment of their homes.

To see the farmer sit so regally poised on his reaping machine, drawn by a spirited team, one might almost fancy that he was just out having a turn for his health, or for the pleasure of the exercise; but when his day's work is done, you learn from him that he is quite as tired as in the old days of swinging the cradle; but now he has leveled his six to eight acres, to show for his work, instead of from one to two, as then. And this is but one of the many labor-saving utensils that has helped to make farming less a drudgery. And what does the farmer do with his time thus saved? Does it enable him to study the science of soil, of fertilizing, of drainage, and thus make himself master of the situation in a greater degree than was his father, whose place he now occupies? It may be so in many cases. There is no doubt a spirit of intelligent emulation among farmers not even known a quarter of a century ago; but there is too much of a desire to enlarge one's boundaries rather than to make the most of what is already possessed.—*Dr. Mary Stafford, in Herald of Health.*

A ROSE BY ANY OTHER NAME, ETC.—At a recent meeting of an English scientific society it was stated that "otto of roses" has been derived from coal tar.

Two Pictures.

Picture No. 1.

A man spends \$50,000 in demonstrating that our foothills possess the most perfect soil and climate for the culture of the almond. He risks his fortune in planting out a large almond orchard, and in bringing his trees to perfection. He makes an exhibit of sample of the product of his orchard, the first fruits of this grand and promising industry, and he is awarded a premium of \$2!

Picture No. 2.

Another man enters a lank, long-legged, slim-necked, narrow-flanked beast, for a trotting race, his shin bones done up in rags to compress the tendons; pads on his ankles to keep him from interfering, so lank, lean and useless that he couldn't haul a sack of beans across a 10-acre lot. This beast, by knack of breeding has been worked up into a shape that admits of his sprawling over a mile track in 2:20. He is awarded \$500 or a \$1,000!

One, a lasting benefit to the county, a source of happiness to the community.

The other a momentary spasm of excitement, the community debauched with a mad thirst for gambling. Further comment is unnecessary. *San Jose Mercury.*

FALL SHADOWS.—"Gem'len," said Brother Gardner, as he smiled down upon the brethren, "it am needless to remark dat de fall sezenn am arrove. De days am gittin' in a hurry, and de nights am puttin' in heaps o' time for de money. Folks who heeb been in de habit of exhibitin' demselves on de front doah steps for an hour or two after supper am now to be foun' aroun' de kitchen stove, and ice cream begins to bite de confidin' tongue. De long evenins am sort o' tiresome to de gen'ral run o' men, an' I want to say a word right heah an' now. From an' arter dis date de club library will be open every evenin', an' members ar' invited to drop in an' read up on history, science, finance, astronomy, and all de odder consistencies of de age. Dar will be slates an' pencils heah to figger wid; dar will be luxuries heah for writin' letters; dar will be war maps o' New Jersey heah; dar will be glee books, hymn books, an' a good fire, an' de mau doan know nuffin' kin drop in heah an' fine out all about it, an' go home to his fam'ly wid a clean conscience an' a marble brow. De ideah am to keep off de streets an' outer de low places, an' at de same time plug de mind wid richness an' wisdom."—*Detroit Free Press.*

SELLING HIS WIFE'S WOODEN LEG.—Mrs. Mary Johnson kept an apple and peanut stand at Washington and Vesey streets for many years, and saved enough money to purchase a home in 119th street, near Fourth avenue. She also saved money enough to buy an artificial leg, having lost one of hers in childhood. In July, while sitting behind her stand, she was sun-struck and taken to the hospital. Her husband then sold the house and furniture, and tried to pawn the wooden leg. Failing to dispose of it in that manner, he sold it for 25 cents. Mrs. Johnson, since her discharge from the hospital, has been unable to purchase another artificial leg. Johnson was arraigned before Justice Smith in the Harlem Police Court, on Thursday, on a charge of abandonment. After having investigated the case the Justice said to him: "This taking sections of your wife and trying to sell them won't do. You'll be pawning the baby next." Johnson was sent to the penitentiary for 12 months.—*New York Sun.*

ONE fretter can destroy the peace of a family, can disturb the harmony of a neighborhood, can unsettle the councils of cities, and hinder the legislation of nations. He who frets is never the one who mends, who heals, who repairs evil; more, he discourages, enfeebles, and too often disables those around him, who, but for the gloom and depression of his company, would do good work and keep up brave cheer. The effect upon a sensitive person in the mere neighborhood of a fretter is indescribable. It is to the soul, what a bold icy mist is to the body, more chilling than the bitterest storm. And when the fretter is one who is beloved, then the misery of it becomes indeed insupportable.

CLEAN hands in matters of money among the young, certainly ought to be the indispensable condition of gentlemanliness. No man who borrows and does not pay, and does not care whether he pays or not, is a gentleman, no matter how witty, or gay, or fine he may be. To speak in good plain English, the man who dresses himself at another's expense, not knowing how to pay, nor caring whether he pays, is a genteel scoundrel! And yet such things are done by good-natured folks, by kind-hearted people, by persons who never probe them morally to ascertain what their tendency is, and what they lead to.

TURPENTINE AS A DISINFECTANT.—Mr. Thos. Taylor, Microscopist of the Department of Agriculture, has an article in the *Washington Evening Star*, from which we take the following: "Turpentine I also found to be a powerful deodorizer. A tablespoonful added to a pail of water will destroy the odor of cesspools instantly, and in the sick chamber will prove a powerful auxiliary in the destruction of germs and bad odors."

YOUNG FOLKS' COLUMN.

A Monkey Dinner Party.

The following is an extract from an account of the monkey theater, by Mrs. Mary Mapes Dodge, in *St. Nicholas*:

It was the funniest dinner party that could be imagined. Five highly respectable monkeys in full dress sat at a table with plates and wine-glasses, and the sprightliest, most attentive of monkeys waited upon them, tray in hand like a good, highly genteel waitress, as she was.

The monkey at the head of the table was dressed as a naval officer, with admiral's hat, epaulettes, and side whiskers all complete. He was very elegant in his manners, when not licking his plate, and he had an injured, reproachful way of turning on his seat and looking at the waitress when she failed to bring what he wanted, that was wonderful to see. At the foot of the feast sat a farmer monkey in funny felt hat, white smock and loose trousers. He had a tremendous appetite and soon finished his meal and began knocking hard upon the table for more. The admiral, who was very proud, never once noticed him, which the hungry farmer accepted in good part, as he did not take any very great interest in admirals.

But the side of the table was liveliest, after all. In the middle sat a fine monkey-lady, whom I afterward learned was called "Mrs. Lorne," and the monkey gallants on each side took turns in conversing with her. Sometimes, indeed, they both addressed her at once, and then the fashionable Mrs. Lorne would utter a fearful screech and give them a piece of her mind, to the great terror of the farmer, and the amazement of the admiral. She was a lovely creature in their eyes, you may be sure, for she wore a red velvet dress and a white hat with bright pink feather, and her coquettish way of tossing her head was quite irresistible. Wine was freely taken by all the guests, but I learned later that it was only raspberry juice and water. It was funny enough to see them take up their glasses in one hand, bow to each other, toss off the contents, and then pound the table for a fresh supply.

I could not see what they had to eat, but it evidently was something good, for they smacked their lips over it and grabbed bits from each other's plates so often that their master frequently was obliged to expostulate with them.

Ah, the master! I forgot to speak of him. He was their servant just then, and stood at a respectful distance behind the table, bottle in hand, ready to fill their glasses whenever called upon, or gently to remind the guests that to lick one's plate is not looked upon as good table manners. Meantime the pretty waitress skipped about bringing this thing and that as the master ordered, and often sinking into a little chair near by for rest and solemn meditation. The dear thing was easily "flustered," and the manners of the admiral sometimes so confused her that she seemed almost ready to faint. At one time, when the master put a pair of lighted candles in her hands, bidding her hold them very carefully, she sprang up and ran from the stage with them, holding them upside down, still blazing and spattering. Now and then the temptation to get a bit from the table grew so strong that she would watch her chance to take a sly grab when the guests were chattering together. Whenever she succeeded in this the hundreds of spectators would applaud heartily. We children thought it was rather improper for grown persons to encourage theft in that way, but we couldn't help feeling sympathy for the pretty waitress, notwithstanding our good morals.

THREE GLORIOUS LITTLE GIRLS.—There was a very pretty little scene enacted at the southern police station to-day. Three little girls—Louise Niedhardt, Mamie Greife and Amelia Oblander, conceived the idea of contributing something for the benefit of the yellow fever sufferers. Their net capital at the outset was two cents. This, of course, could do very little good, but they soon found a way to increase the amount, and by great perseverance, not, however, unmixed with pleasure, they at last succeeded in raising \$10.50. The two cents with which they began was invested in candies, and then a table was procured, covered neatly with a cloth, and the wares exposed for sale. The neighbors, seeing the persistence with which they labored, went to work and helped them with a will. All sorts of things were contributed and quickly sold.—*Baltimore Bulletin.*

POOR LITTLE FELLOW.—A dispatch from Chicago states that a touching incident of the ravages of yellow fever in the South was witnessed in the Palmer house Thursday morning. The early train brought to Chicago a bright-eyed, golden-haired little fellow of perhaps four years of age, around whose neck was a ribbon, and attached to which was a card with the words: "To the Masonic Fraternity: Forward the orphan to San Francisco."—Howard Association, New Orleans." The child, whose name is Walter Wilcox, was the only survivor of a family of seven. The boy was well taken care of and left for San Francisco, where a distant relative will look after him.

GOOD HEALTH.

Alcohol in the System.

We find in *Hall's Journal of Health* a vigorous article in reply to an English review which upheld alcohol as a food, etc. The article is long and forcible, but we have space only for the general summing up, as follows:

If alcohol is not a poison, but food; because alcohol gives force, muscular power—then, arsenic is not a poison, but food, because arsenic gives force, muscular power.

As nature has formed no element in its purity, which element in large dilution is necessary to health, we conclude that such element in its purity is not essential to health.

As men have lived in perfect health without alcohol, the use of alcohol cannot add to that health, because a man cannot be better than well.

As we know of no article which contains hydrocarbon largely, which would not destroy life, if used alone, not even sugar; so we may conclude that alcohol, which does contain hydrocarbon largely, will destroy life, if used alone.

If any elementary substance in its purity destroys life, if used alone, it is reasonable to conclude that the only safe method of using any elementary substance is, in using it in the proportion in which nature has combined it with other materials: therefore, that however essential to existence hydrocarbon may be, it is not healthful or safe to use it in its concentrated, artificial combination, but only healthful and safe in deriving our supplies of it, as contained in our natural food. Therefore, we consider it established, that alcohol is not essential to health; that it is not promotive of the health of those who are well; and that in proportion as it is used largely, or alone, in such proportion is it, like all other elementary concentrations, certainly destructive of health and life together.

A NEW TREATMENT OF TAPE-WORM.—Maleferu oil, koussou, and the bark of the pomegranate root are the anthelmintics usually employed to expel teniae, but their action is violent, and often uncertain. A careful inspection will always enable the medical attendant to discover the ova and fragments of the parasite in the stools, and when this has been done we have a simple and effectual method of insuring a cure. From the results of numerous experiments M. Bouchut has ascertained that not only ascarides, but fragments of teniae, when placed in a weak alcoholic solution, containing 1-35th of amylaceous pepsine, are digested by the fluid in the course of twelve hours. We thus obtain an artificial digestion of the animal matter exactly similar to that which ensues when meat is treated by the same process. On submitting the conclusion drawn from his experiments to the test of practice at the Enfants Malades, M. Bouchut found that the solution of pepsine was eminently successful. If his experience be confirmed a valuable addition will be made to adult as well as to infantile therapeutics.

COLIC CURED BY STANDING ON THE HEAD.—Dr. D. L. Phares, in *Trans. Mississippi State Med. Association*, 1878, recommends as a prompt and effectual cure in many cases of colic, to place the patient in an inverted posture. Some cases which have resisted the ordinary treatment for hours and even days, have by this simple means been relieved and permanently cured in from one to five minutes. Sometimes relief appears to be afforded from the escape of air. In other instances, the air in the bowels changes its place, to the relief of the patient. Some movement of gas in the intestines appears to be essential to relief by this method. Of course it is only flatulent colic which can be permanently relieved by this treatment. The *Pacific Medical and Surgical Journal* says: The confidence with which Dr. Phares asserts the success of the plan entitles it to a trial. The treatment could be easily applied in popular practice. The patient might at least be held up by the heels till the arrival of the doctor.

ANOTHER CURE FOR CORNS.—The safest, the most accessible, and the most efficient cure of a corn on the toe, is to double a piece of thick soft buckskin, cut a hole in it large enough to receive the corn, and bind it around the toe. If, in addition to this, the foot is soaked in warm water for five or more minutes every morning and night, and a few drops of sweet or other oily substance are patiently rubbed in on the end after the soaking, the corn will almost infallibly become loose enough in a few days to be easily picked out with the finger nail; this saves the necessity of paring the corn, which operation has sometimes been followed with painful and dangerous symptoms. If the corn becomes inconvenient again, repeat the process at once.

THE APPETITE OF TEMPERATE PEOPLE.—We read that in Frankfurt, Germany, the hotel keeper found that the members of the Peace Congress, who were mostly teetotallers, ate so much of solid food as to create an unheard-of deficiency in certain dishes, as compared with an equal number of his countrymen, who revelled in wines, brandies and lager-beer. If this proves anything, it shows that temperance secures a good appetite.

DOMESTIC ECONOMY.

CATSUP.—A reader recently called for a recipe for tomato catsup and an other reader furnished one. Here is another recipe, rather more elaborate: Select ripe tomatoes, cutting away any green portions, cut in pieces, stew until thoroughly done, and rub through a sieve fine enough to retain the seeds. Evaporate what passes the sieve to the desired thickness; for this, no rules by quantity can be given, as a bushel of some tomatoes will yield twice as much pulp as others. The evaporation should go on over a slow fire, being careful not to scorch it. When thick enough to pour from a cruet, without inconvenience, add salt and spices. Here the recipes give the greatest possible variety. Be sure and use salt enough; a chopped onion, or clove of garlic, tied in a cloth and cooked in the pulp, to give just a suspicion of the flavor, is liked by many; allspice black pepper, cayenne and mustard, are the principal spices, and are used according to the taste of the consumers. One recipe directs for a half bushel of tomatoes: Cloves, two teaspoonsful, cinnamon, allspice, and black pepper, two tablespoonsful each; these are not to be ground, but bruised, placed in a little bag and boiled in the pulp while it is being evaporated; when the pulp is thick enough, remove the bag and add mustard, ground, two tablespoonsful; cayenne pepper, two teaspoonsful; good vinegar, two quarts, and salt to the taste. Another recipe uses all ground spices, viz.: For the pulp from $\frac{1}{2}$ bushel of fruit; allspice and cloves, $\frac{3}{4}$ oz. each; mustard, $1\frac{1}{2}$ oz. Black pepper, 3 oz.; Mace, $\frac{1}{2}$ oz.; cayenne, $\frac{1}{4}$ oz.; Salt, 6 oz. or sufficient, and vinegar, 2 qts. Add the spices, boil a minute or two, cool and bottle.

MUTTON HAMS.—The following is from a correspondent of the *New York Times*: As a change from a too frequent pork, eggs and poultry diet, mutton hams would be very desirable. A sheep slaughtered occasionally would furnish sufficient fresh meat for a week's consumption, without legs and shoulders. These may be cured as hams, and furnish a toothsome change of diet, either sliced raw or lightly broiled over clear coals. To cure the hams, proceed as follows: The legs of a fat sheep are cut into the shape of hams, and rubbed over with a mixture of equal parts of bay salt and brown sugar. They then remain 24 hours. A pickle is made as follows: Two lbs. each of salt-peter, and 1 lb. of brown sugar are boiled in 4 quarts of water, the liquid being skimmed as it boils; when the pickle is cold the hams are put into it and kept covered for two weeks. They are then taken out, wiped dry, hung up, and smoked over a slow fire of damp wheat straw. The knuckles should be filled with brown sugar and tied over closely with pieces of bladder. The hams are then hung up in a warm place, which causes the fat to partly melt and become absorbed by the lean meat. A few sweet herbs may be pounded and mixed with the pickle to add desired flavor. The shoulders may be prepared by removing the blade bones and treating them as above, taking care to rub the openings with plenty of the mixed salt and sugar. When taken from the pickle these should be sewed up. To keep the meat, place it in a clean box between layers of sweet hay, cover with a close-fitting following lid, upon which a weight should be laid.

EGYPTIAN CORN MEAL BREAD.—We had a taste of bread made from Egyptian corn meal raised in Yolo county, and we must confess that it was delicious. It had a peculiar flavor which commends it above the wheat flour bread, and there is no question but that it is more nutritious. It is dark, taking the shade of buckwheat flour, or we might say it is almost the same as barley meal, without the oily substance which is natural with the latter. There is quite a large amount of it raised in this county this year, and it has been recommended especially for feed for cattle and hogs; but we are of the opinion that if it is made into bread, as we have eaten it, the human family will do well to eat largely of it for the sake of good taste, long life, and a freedom from the many stomach ills life is troubled with.—*Yolo Mail.*

APPLE PUFFS.—Peel and core six tart apples, cook quickly with very little water; cover close so as to make them white and free from lumps; when done, to a puff, sprinkle over them two heaping spoonfuls of sugar, and stir smooth. Set to cool. Prepare your pastry. Beat the whites of three eggs to a stiff froth, stir into the apples and fill the crust; grate a little nutmeg or cinnamon over the top. No top crust. Bake in a quick oven, only long enough to cook the pastry.

TOMATO PIE.—Peel and slice ripe tomatoes and lay them on dishes as for apple pie. Sprinkle on a little flour, and sugar to suit the taste. Bake with two crusts, in a moderate oven. This as well as green apple pie can be made with one crust only, by stewing the tomatoes or apples before putting into pies.

BOILED PEARS.—Take hard pears, wash, and remove specks; be sure that they are sound at the core; put them into a fruit-kettle, cover them with water, at least a quart, and boil them slowly an hour; then add sufficient quantity of sugar to make a lively syrup; boil half or three-quarters of an hour, and serve cold.



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SAN FRANCISCO:
Saturday, October 26, 1878.

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Superior Grain Drill, Baker & Hamilton, S. F.; Furst & Brady Manufg Co.'s Garden City Gang and Sulky Plows, Geo. A. Davis, Agent, S. F.; Boswell's Pure Air Heater, Cooker, Fruit and Clothes Drier, S. R. Lippincott, S. F.; Dutch Flowering Bulbs, W. R. Stronz & Co., Sacramento; Free Water for Orange and Lemon Groves in Placer County, Cal., S. Washburn, Auburn, Cal.

The Week.

The prevailing movement of the week has been the wind. Around the bay and beyond it was a violent "norther;" the first old-fashioned one we have had this season. It was hot and dry, and did much to dissipate the moisture which came in the rains of the week before. These rains were probably heavy enough to start the seeds in all the northern parts of the State, for we have observed germination all along the railroad embankments, and the sweet alyssum is volunteering generously all over our garden. Thus we stand squarely at the portals of another season's growth and the yearly round of farm work begins again. How rapidly the seasons roll round! It is gratifying to see that the years all leave signs of their favoring progress. All over the State this year there have been improvements prosecuted in buildings and in outdoor essentials and conveniences. Many of our readers are living in better houses than they did a year ago, and those who have not yet secured their improved habitations, live in hopes which are sweet to cherish. Our agriculture is moving continually toward a more permanent basis, for many a threatening obligation has been discharged this year. Now for the new year with its spring-time now upon us—may it prove a good year to us all!

THE attempt to introduce cat fish into California waters is meeting with decided success.

Legal Body-Snatching.

Literature is full of proverbs and apothegms descriptive of the proneness of humanity to profit by the misfortunes of the downfallen. The expressions vary in intensity of meaning, from the old Greek original of our modern "kick for the man who is going down the hill," to the extremity of evil propensities in men, which gives them semblance to foul birds of prey gorging themselves upon carrion. So general, then, is the disposition to profit by the misfortunes of others, that perhaps few of us are so pure that we are wholly free from it. But wide-spread as is the evil, there are occasionally instances of its presence so glaring that the mind almost recoils from the contemplation of them.

There are different kinds of birds of prey. There are eagles, for example, fierce, relentless birds, pursuing live animals, catching and devouring them; and there are vultures, joying to fill and smear themselves with carrion. We have in human life manifold examples of these types of bird life. We have the oppressive corporation with its clutch upon the throat of industry; we have the galaxy of thieves in public places, sapping the strength and growth of municipalities and States. These are foes of progress and they merit summary punishment. But they pursue live game, for the public arm is strong, and when they are removed, prosperity returns, just as the flock increases when the shepherd's gun brings down the eagle.

It is of a worse class of humanity's foes that we would speak, and we call it a worse class, for it delights in a species of preying which the nobler brutes and birds disdain, and thus links humanity directly with the vulture of the air and the jackal of the plain.

We have spoken of legal body-suatching. What else than this was it that seized the property of a man who failed to meet an obligation, and threw him into involuntary bankruptcy, and then began to cover his property with legal poultices and blisters in the form of fees to every officer and underling, until the property all was broken to fragments in the legal crusher, and the smallest piece was set apart to pay real creditors? We have heard the best lawyers pronounce the bankrupt act which has now happily been repealed, the most abominable piece of legislation ever perpetrated.

But there is another piece of legal body-snatching which it seems is yet possible. In reading the reports of legal proceedings in the city papers we find the case of a mutual banking association, generally called a savings bank, which had suffered severely through the defalcations of its manager. It was advised by the bank commissioners to do certain things to repair its financial condition, and before the many unfortunate people who had trusted their money to this company could decide what they could do to retrieve their endangered fortunes, the legal body-snatchers fix upon the institution and secure orders from the courts to throw their resources into the hands of a receiver. In the court, one of our most estimable citizens, who espoused the interest of the unfortunate depositors, offered affidavits to prove that the party who secured the order from the court was himself the attorney of the bank, and had lined his pockets with corrupt bribes from people who received loans upon wholly inadequate security. If all these things be true as alleged, what a detestable body-snatchers these trusting depositors have nourished hitherto; for the man who had basely used his position as legal adviser to rob the bank in its prosperity, becomes in its adversity the vulture to gorge himself upon its remains. We hope for the credit of the name humanity these things are not true. And yet thus the reports of court proceedings represent them. As Madame Roland said of liberty, so must we say of liberty's association: Oh law! What crimes have been committed in thy name.

Some of our correspondents have alluded of late to those among us, who, under forms and in the guise of the law seize upon the property of the dead, and, by accumulating costs by every ingenious means they can devise, either absorb the whole estate during the process of administration or return to the heirs the wretched fragment which a surfeited function does not permit them to swallow. It is hard for us to discern the true legal principle in laws which make men's truest friends and life long associates the foes of their estate when they depart.

There are records of cases in our Probate Courts which leave no room to doubt but this is the theory upon which their procedure rests. We have seen a wife so cut off from all share or management of the family property, which she had aided to accumulate, that she had to hire a man to steal the house dog from those evilly disposed persons who, under the cover of the law, were robbing her of even this participation in the property left by her intestate husband. It is hard to conceive of such degradation of a wife in this age of enlightenment, but such things are vouched for by those who have been forced to run the gauntlet of our Probate Court. Is this not the intrusion of the vulture? Is it not a form of legal body-snatching? We think that propositions to place the administration of the community property of man and wife upon a truer basis of justice to woman is now before our Constitutional Convention. We hope the friends of fairness and justice to that body will insist upon reforms in this direction, which will enable a man to live and die without the fear that a contingency may arise to which his wife shall be looked upon as a thief—in theory if not in fact.

It is trite to speak of "stealing the livery of heaven to serve the devil in," but what less than this is it to invoke the agency of the law to plunder trusting creditors, to ruin frugal and hopeful depositors, and to make the rattle of the clods upon the coffin the reveille to vulture's bauquets.

QUERIES AND REPLIES.

The Afflicted Beet Leaves.

EDITORS PRESS:—I sent you a beet leaf, somewhat rusty, but the rusty crop is almost gone and replaced by the new growth. I did not find one full of holes as the first crop appeared to me, and could hardly find a good rusty specimen at all. Perhaps I was mistaken as to the cause of the holes, as you seem to suggest.—E. BERWICK, Monterey.

The leaf was received and examined with pleasure. The rust with its rupture of the cuticle of the leaf and the clefts running over with reddish spores was easily discerned under the microscope. We found a few holes cut quite through the leaf and these are doubtless the work of an insect. The rupture of the epidermis by the rust and the hole cut quite through the leaf by the insect are quite different, and the rust, in the present case at least, is much the greater foe. We could not find any traces of the insect described by Mr. Ashburner, and which hatches into a maggot between the layers of leaf tissue and shows its presence by a yellowish blotch upon the leaf. The holes in Mr. Berwick's specimen were clean cut as though by a leaf-eating beetle of some kind.

Passion Fruit Jelly.

EDITORS PRESS:—I have the pleasure of sending you by mail a glass of jelly made by my wife out of the fruit of *Passiflora edulis*. It contains only one-half a pound of sugar to one pound of juice. Generally there should be pound to pound. This jelly was made about two months ago and the object was to see how it would keep with so little sugar. We think it is very fine and has the real flavor of the fruit. At the same time it makes a fine syrup, from which a very refreshing summer drink can be made by mixing with water. Our grenadilla begins to bloom again and this time is quite covered with flowerbuds.—I. GRELCK, Los Angeles, Cal.

The jelly was duly received. It certainly presents the characteristic flavor of the *Passiflora edulis* in a remarkable degree; especially is the first taste striking. The consistency is rather thin, in fact there would be a question whether it should be called syrup or jelly. In either case it is a very interesting and valuable product, and is adapted for nearly all uses to which jellies and fruit syrups are applied.

Fashionably Bred Shorthorns not at a Discount.

EDITORS PRESS:—A short time ago I answered an article in the *Bulletin* headed, "Fancy Stock a Discount," which went on to say that through the combination of breeders of other breeds of cattle and those breeding Shorthorns that were not of fashionable strains, the prices of the fashionably bred ones were being brought down to a level with those of the plainer bred ones. In my answer to said article, I endeavored to show that this was a mistake.

In a more recent communication to the Press I showed that the most fashionably bred Shorthorns still sold for prices highly remunerative to the breeder; at the same time saying that I had it from reliable authority that a higher average was expected to be made on a lot of choice Shorthorns to be sold on the 18th of September, than had ever been made before at any

public sale. I have just received the results of that sale. The cattle were the property of the Duke of Devonshire, England, and here is the average of each animal and the sum total (in round numbers) realized by 30 head of cows, heifers and bulls:

18 cows, averaged,	\$3,972; total	.....	\$71,496
12 bulls, " "	\$2,345; " "	.....	\$28,140
30 head " "	\$3,321; " "	.....	\$99,636

The highest price realized for any single animal was \$13,300, for "Baroness Oxford 5th;" the highest priced bull being "Duke of Oxford 44th" who sold for \$8,250. Australia takes one Oxford cow at \$11,025. All the rest of the animals sold remain in England and Scotland.

Let us now compare this sale with the prices obtained at the three preceding sales of the same class of Shorthorns—as regards pedigree—held at the same place:

1864,	19	cows and	helfers,	and	11	bulls	averaged	....	\$330
1871,	31	"	"	"	12	"	"	....	\$1,203
1874,	43	"	"	"	15	"	"	....	\$1,715

The above prices are decidedly progressive and ought to satisfy the most sceptical that "blood will tell."—ROBT. ASHBURNER, Baden Station, San Mateo Co., Oct. 14th.

The Pruning Saw.

EDITORS PRESS:—In the RURAL of the 12th inst. Mr. W. H. Jessup claims to be the originator of a certain handy pruning saw. I hope I shall not detract any from that gentleman's fame by stating that these same saws have been in use by our orchardists in this county for the last 10 years. Who first got them up no one knows. They are all Mr. Jessup recommends them to be.—A. KAMP, San Jose, Cal.

We happened to meet Mr. Jessup on the ferry-boat this morning and told him of the statement of Mr. Kamp. He is sure the saw he described is different from that used elsewhere. It is not a matter of much importance where the saw was used first, so long as it is good and people are informed of it. But for the satisfaction of the disputants, it might be well for Mr. Kamp to place his saw on a sheet of wrapping paper, trace the outline of it with a pencil, and mark in the different parts if it is convenient for him to do so. With this sketch we can decide the point at issue between our correspondents.

AT THE STATE UNIVERSITY.—We went to Berkeley on Tuesday to hear Mr. Dwinelle's opening discourse, on opening his series of lectures on field cultures in the College of Agriculture. The lecture was an admirable one, being in the main a statement of the relation between science and practice in agriculture. The positions taken were illustrated clearly and forcibly. We hope soon to give our readers an abstract of the discourse. We found that Professor Milgard's laboratory assistant had resigned his position, to accept a place as analyst on one of the guano islands in the South Pacific. This leaves the Professor unaided in his laboratory, and his class duties preclude his coming down to the test tube and balances himself on special examinations. There may, therefore, occur some delay in his reports on subjects submitted to him for examination, until the services of another assistant can be secured.

BEAN STRAW FOR SHEEP.—Many of our readers will have considerable amounts of bean straw on hand this fall. A correspondent of the *Rural New Yorker* notes that "bean straw is excellent food for sheep, and should be carefully saved for that purpose. When fed with beans or other grain, it make a very rich warm manure, quite as good, if not better, than clover. I know a farmer, who, every winter fattens a considerable number of sheep, who finds profit in feeding not only his own bean straw, but as much more as he can buy at low rates from farmers who grow beans, but, keeping no sheep, have no use for the straw."

SIXTY-EIGHT POUND WHEAT.—It is now stated definitely by telegraph that the gold medal awarded to Hon. John Bidwell, of Butte county, was for wheat weighing 68 pounds to the bushel. We have heard that the cereal exhibit at Paris was very complete, and consequently this is a bright mark for California. It is fortunate that California wheat is sold by the cental and not by the bushel.

ON FILE.—"Agriculture in England," J. P. S.; "Poothills west of San Jose," C. F. T.; "Carp Culture," L. D.; "SantaBarbara Co., No. 2," B. W. C.; "Apiary," R. W. K.; "Santa Clara No. 2," A. C. K.; "Floriculture," W. C. L. D.; "Forage Plants in Fresno Co.," W. A. S.; "Glimpses by the Wayside," M. S.

THE men who located on the Sonhomish flat, in Washington Territory, a few years ago, and dyked their lands, are now among the wealthiest farmers in the Territory.

Boswell's Pure Air Heater, Cooker and Fruit Drier.

We have the opportunity of introducing to our readers something new and very interesting in the line of a combined apparatus for heating, cooking, fruit and clothes drying. In fact, the apparatus, which comes to us very highly recom-

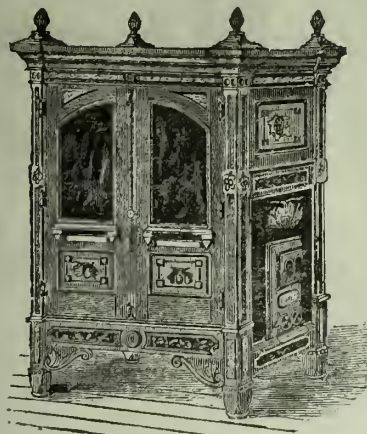


Fig. 1. Exterior of Heater and Cooker.

mended by those who have used it, centers in itself all the functions of a kitchen range, a heating stove of great capacity, and a domestic drying apparatus. Thus, with the same arrangement that the housewife heats her house, she can not only cook a dinner, but produce large quantities of dried fruit, and in rainy weather can quickly fit her washing for the ironing board without having wet garments hanging round the house all day and night, as now she is often forced to do. A cheap and handy apparatus, which claims to do all these things well, is certainly worthy of examination. In the one combination of a kitchen stove with a fruit drier there is advantage enough to call for attention, because in all our fruit-growing counties there is need for a cheap drying machine which can be run at small expense and without extra help. If the Boswell heater is found the desideratum which is now so much demanded, it will be worth thousands of dollars in every fruit-growing township in our State.

Because of these high claims, and because these claims are approved by certain Eastern men whose judgment we are bound to respect, we have decided to give the Boswell heater a full illustration in its different features, so that our readers may examine and learn its adaptability to their uses. We shall include a detailed drawing of its plan of construction, upon which great claims are based.

Fig. 1 shows, in reduced size, the external appearance of the combined heater, cooker and drier. It is neat and ornamental, and its exterior finish is graded according to the large or small amount of money which the purchaser wishes to expend upon beauty. It is in brief a handsome piece of block walnut furniture, with glass doors and lights, etc.

Fig. 2 furnishes a detailed drawing of the

interior arrangements when the device is used for heating alone, but from it may also be learned the general design by which complete combustion is claimed to be secured.

The following is the description and philosophy furnished by the inventor: In every style of

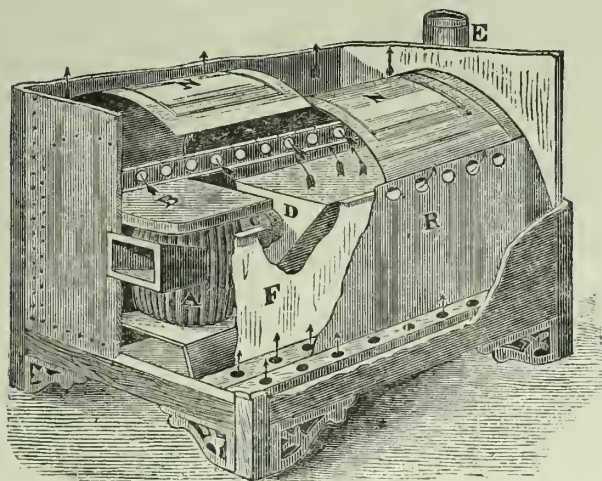


FIG. 2. SECTIONAL VIEW OF ARRANGEMENT FOR DEFLECTED HEAT, ETC.

the Boswell heater, the fire-box or the receptacle for fuel is small, and concentrated with a view to economy and durability. The construction of each fire pot is such, that the fuel is concentrated, and thus produces more heat than i

In all other methods of heating, three-fourths of the carbon and hydrogen passes off into the chimney unconsumed.

The fire-box and prism are surrounded by what is termed a shield, *F*, (see cut), with a curved top, *NN*, which is made to open and

shut easily and steadily. Between the shields and all along the sides of the stove and prism, is a sheet-iron partition, *R*, called a deflector. It has two offices: 1st, it keeps the atmosphere from contact with the heated irons; 2d, it keeps the heat

in this State, and that is as a fruit drier. From the engraving can be seen the arrangement of the trays. It is claimed that the employment of deflected heat secures much better results than those obtainable by direct radiation. This point is discussed at length in the pamphlets describing the heater, and we must refer the reader to them. The fruit-drying shelves, as shown in the engraving, are 18 by 23 inches; the heater will hold eight tiers, with two shelves in each tier.

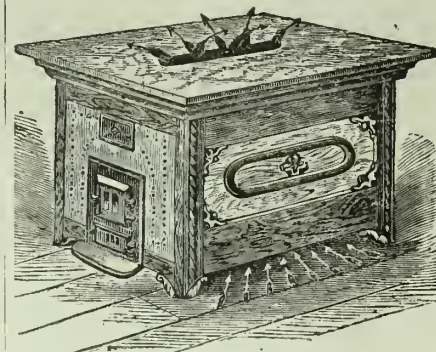


Fig. 3. Exterior of Heater Exclusively.

Fig. 5 shows the adaptation of the heater for laundry purposes. The clothes are folded several thicknesses upon each bar, thus one bar is made to hold from three to five shirts, equal to 12 or 20 feet of clothes line. This bar is then placed in the heater, and from five to seven bars can be put in at one time, thus leaving space for the circulation of the rapid currents of heated air. The double currents of deflected heat disengage the vapor with great rapidity, and the steam can be passed up the chimney as fast as it is disengaged, by opening the valve in the escape pipe. Thus the clothes are bleached as well as dried.

Fig. 6 gives a sight of the heater as a baking agency.

In baking the superiority of deflected over radiated heat is again claimed. The deflectors are marked *NN*. The effect of deflected heat is said, in brief, to be the only way of thoroughly cooking, and at the same time retain in the fullest degree the natural nutritive qualities of the food.

At Fig. 7 the heater appears in full operation as a kitchen range. *O* is the baker, with its different dishes all baking without imparting flavors to each other. *P* is the wash boiler; *E*, the main pipe; *J*, the crosspipe; *Q*, the glass door. The baker, *O*, has a glass door in front. It is claimed that the heater economizes time, labor and fuel, and avoids exposure to heat in cooking, as well as in baking. The person cooking is protected from the fire by the shield and deflector. Steam and odors produced in cooking can be passed up the flue.

The kitchen utensils are made of pressed and tinned iron, and are much lighter in handling and can be more easily kept clean, and will last just as long as large, heavy iron pots and kettles. There are no stove lids to lift, and, therefore, no coal soot settles upon your utensils, and there is no danger of having dresses and aprons

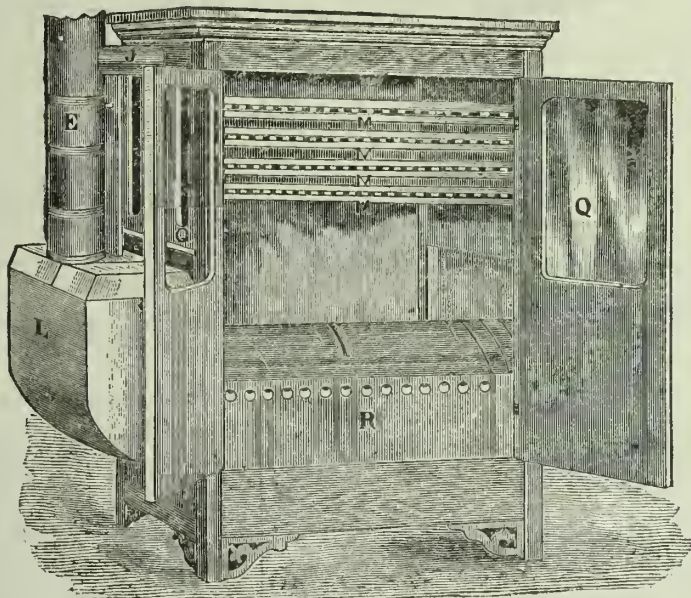


FIG. 4. THE BOSWELL HEATER ARRANGED FOR DRYING.

possible in any other way. It will be seen in the cut, that attached to the flue of the stove, is a hollow iron prism, *D*, which radiates to its own center, concentrating the disengaged carbon and hydrogen from the fuel of the fire-box, so causing intense molecular motion in the center

where it can be utilized. The prism and stove are on the same line, hence the heat is confined on a level of four feet, instead of passing directly up the flue, as in the case in other heaters and stoves.

Fig. 3 is an adaptation of the principle for the purpose of heating only. It is in a wooden,

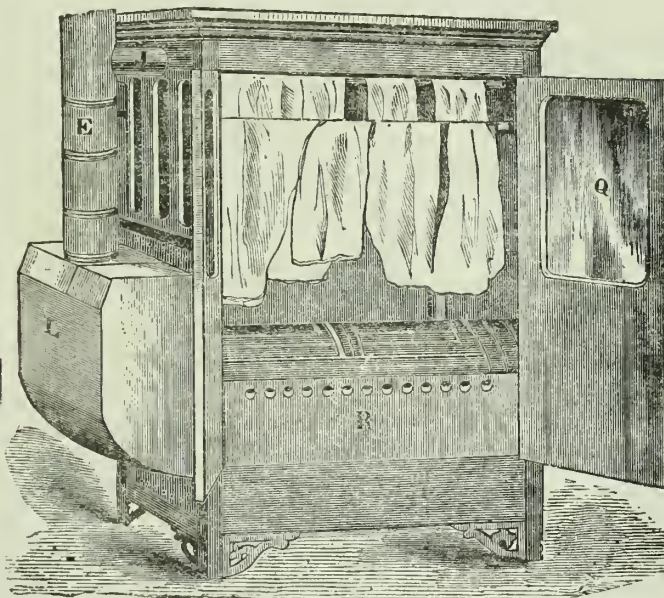


FIG. 5. THE ARRANGEMENT FOR DRYING CLOTHES.

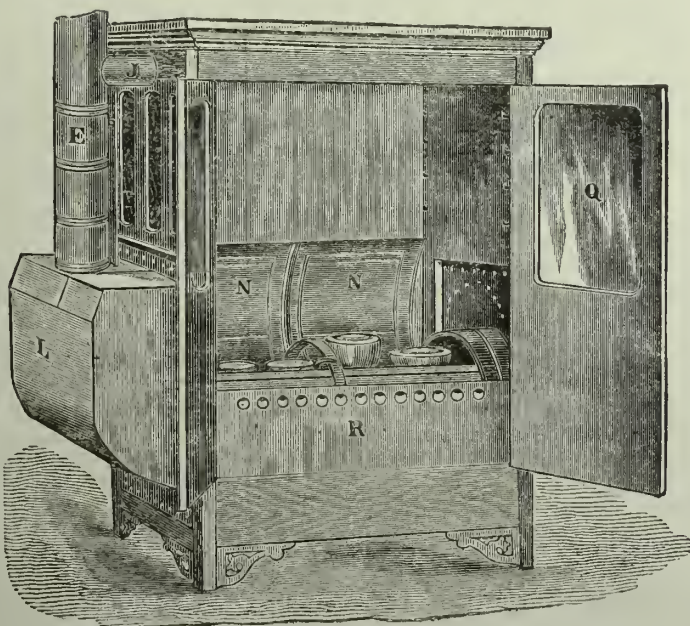


FIG. 6. THE BOSWELL HEATER FOR BAKING.

of the prism and flue, *C*. The flue, *C*, between the stove and prism is perforated at intervals of half an inch entirely around. Thus it is seen that a concentrated jet of superheated oxygen is thrown on every side of the concentrated carbons and hydrogen or the gases and water of the fuel, and so produces complete combustion.

Fig. 4 shows the heater in a capacity which it is believed will constitute its widest usefulness

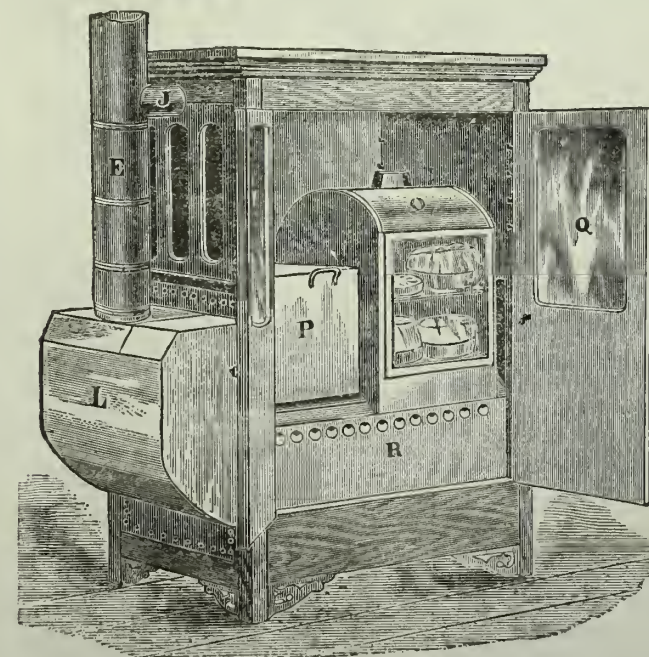


FIG. 7. THE APPARATUS FOR COOKING PURPOSES.

soiled during culinary operations.

Thus we have shown the Boswell heater, cooker and fruit drier in some of its prominent relations to domestic economy. How well it answers the claims made for it we cannot perhaps do better than cite the experience of Dr. R. T. Trall, of Florence Hights, New Jersey, in his article in the *Science of Health Monthly Magazine*. Dr. Trall wrote as follows:

"When we read the circular of Mr. Boswell, setting forth the merits of his invention, and the various kinds and wonderful amounts of work it would do, we were skeptical. If not too good to be true, we thought it was claiming altogether too much for any one machine which was ever contrived or that can be imagined, and a simple and cheap affair, at that! But on being assured by Dr. D. C. Moore, of Salem, Ohio, who had one of the machines in use, and who had the testimonials of several other parties who had tested and adopted it, that it was all that it claimed to be, we at once procured it. We have now thoroughly tested it, and can conscientiously corroborate all that has been said or pretended in its favor.

"The hygienic principle of the machine consists in the arrangement by which the heat can be deflected through the cooking part and then passed off to the chimney flue; or, by turning a valve, the heat can be used again in warming the room during cold weather; while, by consuming the smoke, the fuel is economized and all contamination of the atmosphere of the room prevented. The surplus heat can also be used again in warming rooms above or adjacent. The proprietor, therefore, does not exaggerate, when he says the saving of fuel during the cold months of the year will equal the cost of the machine.

"In drying clothes or fruit, in heating flat irons, and for heating water or boiling, a more convenient or economical apparatus we are unable to conceive; and for drying fruit or clothes it renders us independent of sunshine or stormy weather. The quality of fruit, which is dried very rapidly, seems to be perfect, and the quality of nearly everything cooked in it is as good as the material employed admits, while many things which are baked or roasted are better than it is possible to make them in common stoves or ranges. In a word, the machine is just what every family needs."

Prof. J. Lawrence Smith, Louisville, Ky., writes:

"The first two weeks I tested its capacity for cooking and washing at the same time for my family, which may be considered equal to an ordinary sized family. I weighed the coal that was used during these two weeks, which amounted to an average of 35 pounds each day (nearly one and one-half buckets of ordinary size) for the cooking, washing and ironing combined. With this same coal the water in the boiler was heated in a most satisfactory manner, furnishing all the water required for washing, bathing, etc. A smaller quantity of coal would have sufficed for the cooking alone.

"As regards cooking, every variety of it has been tried, as boiling, roasting, baking, broiling, frying, etc., and it accomplishes them all in a very satisfactory manner, and that without heating the kitchen as an open range does, or even to a disagreeable degree of temperature. [Written in August, 1877.] I at first apprehended that the broiling would be defective, for I always broiled over a charcoal fire, but my experience with it in this regard makes it no longer desirable to return to the charcoal fire. I have also dried fruit and okra at the same time that the cooking was going on, and with ordinary care find that it does this excellently.

"I have witnessed baking of meat, of bread and of cake at the same time without interfering with each other, or affecting the respective flavors of the different dishes.

"I am satisfied that this cooker accomplishes its manifold results better than any single kitchen arrangement I have ever seen."

We are assured that these estimates of the heater is being rapidly approved, and that at the East, the Boswell heater is coming to be considered as necessary in the household as a sewing machine. It has taken the first premium at all the State fairs in the United States.

The heaters which are sold in this State are of California manufacture. Any further information which may be desired concerning them may be had by applying to or addressing S. R. Lippincott, Sherman Block, 606, Room No. 4, Montgomery St., San Francisco.

THE LIEBIG MEMORIAL.—In response to an invitation issued by the Executive Committee at Munich, various models of a proposed statue to the memory of Liebig have been sent in by sculptors from different parts of Germany. The jury appointed to select from them the first and second best models met there recently, and awarded the prizes of 2,000 and 1,500 marks offered by the committee to Herr Wagnmuller, of Munich, and Herr Bugas, of Berlin, respectively. A sum of 120,000 marks is available for the completion of the work, and the committee have given notice that in accepting any particular model, they reserve to themselves the right of erecting in Giessen a copy of the original work about to be placed in Munich.

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A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

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M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

GEORGE McCracken, San Jose, Cal. Pure blooded Cotswold Sheep for sale.

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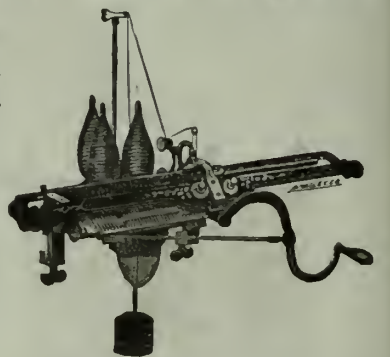
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The undersigned, having formed a partnership to carry on
the business of General Publishers under the firm name and
style of Dewey & Co., Publishers, this certifies that the prin-
cipal place of business of said partnership is situated at 202
Sansome street, in the city of San Francisco, State of Cali-
fornia; and that Alfred T. Dewey, residing in the city of
Oakland, State of California, and Warren E. Ewer, residing
in the city of San Francisco, State of California, are all the
members of said partnership.

ALFRED T. DEWEY.

W. B. EWER.

STATE OF CALIFORNIA, }
CITY AND COUNTY OF SAN FRANCISCO. }

On this second day of October, in the year one thousand
eight hundred and seventy-eight, before me, Chas. E. Kelley, a
Notary Public in and for the said city and county, person-
ally appeared Alfred T. Dewey and W. B. Ewer, known to me
to be the persons whose names are subscribed to the within
instrument, and they acknowledge to me that they executed
the same.

In witness whereof, I have hereunto set my hand and
affixed my official seal, the day and year in this certificate
first above written. CHAS. E. KELLEY,
[Seal.] Notary Public.

Endorsed—Filed October 7th, 1878.

THOS. H. REYNOLDS, County Clerk.
By J. WHALEN, Deputy Clerk.

CERTIFICATE OF PARTNERSHIP.

The undersigned, having formed a partnership to carry on
the business of Patent Agents under the firm name and style
of Dewey & Co., Patent Agents, this certifies that the prin-
cipal place of business of said partnership is situated at 202
Sansome street, in the city of San Francisco, State of Cali-
fornia; and that Alfred T. Dewey, residing in the city of Oak-
land, State of California, and Warren E. Ewer, residing
in the city of San Francisco, State of California, and George H.
Strong, residing in the city of Oakland, State of California,
are all the members of said partnership.

ALFRED T. DEWEY.

W. B. EWER.

Geo. H. STRONG.

STATE OF CALIFORNIA, }
CITY AND COUNTY OF SAN FRANCISCO. }

On this second day of October, one thousand eight hun-
dred and seventy-eight, before me, Chas. E. Kelley, a Notary
Public in and for the said city and county, personally ap-
peared Alfred T. Dewey, W. B. Ewer, and George H. Strong,
known to me to be the persons whose names are subscribed
to the within instrument, and they acknowledged to me that
they executed the same.

In witness whereof, I have hereunto set my hand and
affixed my official seal, the day and year in this certificate
first above written. CHAS. E. KELLEY,
[Seal.] Notary Public.

Endorsed—Filed October 7th, 1878.

THOS. H. REYNOLDS, County Clerk.
By J. WHALEN, Deputy Clerk.

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GRANGERS' BANK OF CALIFORNIA. }
OFFICE: N. E. COR. CAL AND DAVIS STS., S. F. }
Notice is hereby given that at a meeting of the Direc-
tors, held on the 8th day of October, 1878, an Installment
(No. 4) of Ten (10%) per cent, equal to Ten (\$10) dollars
per share, was levied upon the Capital Stock of the Bank,
payable immediately, in U. S. Gold Coin, to the Cashier
at the office of the Bank. Any Stock upon which this
installment shall remain unpaid on the 1st day of Decem-
ber, 1878, will be Delinquent and disposed of according to
law.
G. W. COLBY, President.
FRANK McMULLEN, Sec'y.
San Francisco, October 14th, 1878.

DIVIDEND NOTICE.

Notice is also given that a Dividend (No. 4) of Ten (10%)
per cent., equal to Three (3) dollars per share, on the
paid up Capital of the Bank, was declared at the same
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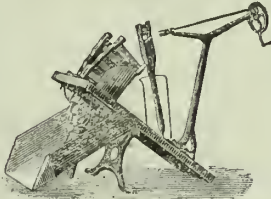
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IMPROVED APPLE PARER, CORER AND SLICER.

Letters Patent No. 88,755.



This Machine is
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order; does its work
complete; slices the
fruit of even thick-
ness; so prepared, it
dries evenly and
quickly, say in 36
hours, thus avoid-
ing a long exposure
to the miller or
moth producing the

worms. It does its work better and quicker than any other
machine. Boys and girls can use it with great facility; many
considering TWENTY BUSHELS a fair day's work,
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THE BOSS PRUNER.

Patented January 8th, 1878.

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Works on a cog principle. Smallest size cuts one inch,
and largest size two inches in diameter. Has been thor-
oughly tested, and given perfect satisfaction. Sold by

GEORGE LARKIN,

Newcastle, Placer County, California.

50 Perfumed, Snowflake, Chromo, Motto, etc., CARDS,
with name, 15c. G. A. SPRING, E. Wallingford, Ct.

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TO LEASE

ON FAVORABLE TERMS,
50,000 Acres of Irrigated Land
in Kern County, with abun-
dance of Water Free.

In tracts of 80 acres and upwards, with comfortable
House, good Barn, and Well of excellent water.

CROPS ARE SURE.

An average of 30 bushels of wheat per acre, and other
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INDUSTRIOUS FARMERS

With stock and implements will find every advantage in
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COLONIES WANTED.

For further particulars inquire of

McAFEE BROTHERS,

202 Sansome Street, San Francisco

FOR SALE.

A fruit and grain ranch, containing about 100 acres, sit-
uated at the old mining town of Knight's Ferry, Stanis-
laus county, California. The place is extensively planted
with fruit trees, vines and berries, all of the choicest vari-
eties, of vigorous growth and bearing abundantly, every
thing of this kind being raised here with the least possi-
ble care and in the greatest perfection. The facilities for ir-
rigation, when required, are first-class, the ditch of the San
Joaquin Water Company traversing the grounds. There are
store-houses of large dimensions, with cellar underneath;
a spring-house, containing distillery apparatus and con-
veniences for making wine; also, stables and all other
needed out-houses. This land is well inclosed and every
way highly improved. The products of these orchards
and vineyards have for twenty years commanded the
highest prices in the San Francisco market, the adjacent
mining camps having also taken a portion of them at good
prices. There are on the land rich gold placers that could
be worked with large profit, as sufficient water for the
purpose can be had at low rates. The farm-house is but
3 miles from the railroad station and within an easy day's
drive of many prosperous mining camps. Work horses,
wagons, harness, cows, hay, farming utensils, a quantity
of wine and vinegar, and much other valuable personal
property goes with the place. As this fine estate must be
sold, it is offered, animals, etc., included, at the low
price of \$4,000, fifteen hundred of which may, if desired,
remain secured on the land at the rate of 10 per cent. an-
nual interest. "Title perfect. For further particulars in-
quire of Claus Gerckens on the premises, or of Dr. Henry
De Groot, office MINING AND SCIENTIFIC PRESS, 414 Clay
street, San Francisco.

FARM FOR SALE.

\$4,000.—Two Hundred Acres of
Land in Mendocino County.

Thirty miles from the county seat, and 20 miles from
the Coast, one of the healthiest localities in the State,
especially for consumptives. The place is fenced off in
six different fields. Plenty of water and timber for all
purposes. A good orchard. Vegetables of all kinds
grow well. A good dwelling with six rooms, ceiled and
painted inside, good frame barn, granary, storehouse,
smokehouse, etc.

Also, Six Hundred acres of grazing land, well fenced,
three miles from the above farm, plenty of water and
timber for all purposes. Price, \$2,250.

For further particulars, address "B. T.," care of
DEWEY & CO., PACIFIC RURAL PRESS office, San Fran-
cisco, Cal.

STOCK RANCE TO LET.

Several thousand acres, at a very low
rate. Apply soon to EDWARD

FRISBIE, Proprietor, on the Reading
Grant, Anderson, Shasta County,
California.

A Good Dairy Ranch For Sale

On Bear River, Humboldt County, Cal.,
containing 600 acres of ss good grazing land as any in the
State. New Dairy and Dwelling House. The land is well
watered, and plenty of timber for firewood and shelter,
and choice dairy cows and five horses. Price, \$13,000, one-
half down, the remainder on easy terms for one, two or
three years. Apply either in person or by letter to RICH-
ARD JOHNSTON, Post-office address, Myrtle Grove, Hum-
boldt County, Cal., or to R. J. JOHNSTON, No. 1,324 How-
ard Street, San Francisco.

BEE RANCH FOR SALE.

One of the best ranges in the State. At present work-
ing 375 stands Italian Bees. Apply for particulars to

D. W. McLEOD,

Riverside

GRAPE DRIERS, ATTENTION!

Parties who cannot perfectly cure their Orapes by the
sun can make liberal arrangements to either sell them or
have them cured on my Driers, by applying to

GEO. A. DEITZ,

No. 81 J Street, Sacramento, California.

New Red Raspberry.

Henrietta, Berries 3 1/2 inches around. Twenty other
varieties for full planting. Blackberries, Currants, Grapes,
etc. Circulars free. G. H. & J. H. HALE, South
Glastonbury, Conn.

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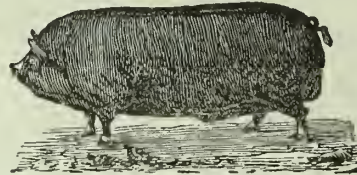
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Breeder and Importer of the "Crown Prince,"
"Sambo," and "Bob Lee" families of Berkshires.
Also, pure Suffolk hogs and pigs. Short Horn and
Jersey, or Alderney cattle. Merino and Cotswold
sheep. Prices always reasonable. All animals sold are
guaranteed as represented and pedigreed.

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My Berkshires are Thoroughbred, and selected with
great care from the best herds of imported stock in the
United States and Canada, and for individual merit can-
not be excelled. My breeding stock are recorded in the
"American Berkshire Record," where none but pure bred
Hogs are admitted. Pigs sold at reasonable rates. Cor-
respondence solicited.

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Three Miles N. W. of San Bernardino, Cal.



Thoroughbred Berkshire and Poland China
Swine. Light Brahma and Black Cochins
Chickens for sale. T. C. STARR.

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THOROUGHbred POULTRY.

116 Acres

DEVOTED TO

Unlimited Range.

Healthy Stock.

FANCY

POULTRY.

Largest Yards

on the Coast.

Brahmas, Leghorns, Plymouth Rocks, Bronze Tur-
keys, Geese, Pekin Ducks, Guinea Pigs, Etc.

Safe arrival of Fowls and Eggs Guaranteed.

Pamphlet on the care of fowls—hatching, feeding,
diseases and their cure, etc., ADAPTED ESPECIALLY TO THE
PACIFIC COAST. Sent for 15 cents.
Send stamp for price list. Address

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That Mrs. C. H. Sprague, at the California Poultry
Yards, at Woodland, Yolo County, keeps the choicest lot
and the greatest and best variety of Thoroughbred Fowls
of any one west of the Mississippi river, and that one can
get just what is wanted by sending orders to her.

Grangers' Bank of California,

42 California Street,

SAN FRANCISCO CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

OFFICERS:

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SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for
the transaction of a general banking business.

Having made arrangements with the Importers' and
Traders' National Bank of N. Y., we are now pre-
pared to buy and sell Exchange on the Atlantic States at
the best market rates.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce.

REFERENCE.—Traders' National Bank, N. Y.; Eli
wanger & Barry, Rochester, N. Y.; C. W. Reed; Sacra-
mento, Cal.; A. Lusk & Co., San Francisco, Cal.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, October 23d, 1878.

Matters are running along evenly in most lines of trade. There are few changes of value in produce. The Wheat market in London is reported by "Cooper's special" to be firmer than a week ago without change in price.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday	9s	8d	10s	4d	9s	10d	10s	4d
Friday	9s	8d	9s	9d	9s	10d	10s	1d
Saturday	9s	8d	9s	9d	9s	10d	10s	1d
Sunday	9s	8d	9s	9d	9s	10d	10s	1d
Tuesday	9s	8d	9s	9d	9s	10d	10s	1d
Wednesday	9s	8d	9s	9d	9s	10d	10s	1d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1876	10s	1d	10s	4d	10s	5d	10s	8d
1877	12s	6d	12s	9d	12s	9d	12s	1d
1878	9s	8d	9s	9d	9s	10d	10s	1d

Freights and Charters.

There is no improvement in the freight market and no immediate prospect of any. The nominal rate for Grain to Liverpool, wooden vessels, is 32s 6d@35s.

The Foreign Review.

LONDON, October 22.—The *Mark Lane Express* says: As fine weather cannot be relied on, farmers have given more attention to plowing and sowing than threshing, and the deliveries of home-grown Wheat consequently have been reduced during the past week. A fair quantity, however, has been marketed in provincial exchanges and in Mark Lane, but the damp air has prevented samples from being exhibited. The condition and dullness of the trade was mainly attributable to this cause, as fine Wheat, which is very scarce, has not shown further decline. As the bulk of offerings consisted of badly-conditioned lots which were really unsalable, a weaker tone apparently prevailed than the actual state of trade justifies. Business in foreign Wheat was about as bad as it could be. The Corn trade is reduced to such a state of distrust and discouragement that it will probably be long before business shows signs of elasticity. Trade in feeding Corn is equally unfavorable, as, with the exception of the finest samples of malting Barley, all articles have receded in value, with large arrivals at ports of call. The floating cargo trade for Wheat was very quiet until Friday, when, with the revival of the continental demand, the tone improved, and the price advanced 6d@1s per quarter from the recent lowest point. Maize was dull and rather cheaper. Barley was fairly steady.

Eastern Grain Markets.

NEW YORK, October 20.—Some branches of trade continue to be unfavorably affected by the disturbed condition of financial affairs in Great Britain, the export trade in produce in particular. In the early part of the week the course of the grain markets was downward, but subsequently they took an improved turn and closed about as on this day week. The Agricultural Bureau figures up the Wheat crop at over 400,000,000 bushels, with a surplus for exportation of over 125,000,000 bushels. This would seem to indicate a continuance of extreme low prices, but as an offset it turns out that about every country in Europe that is not self-sustaining in the matter of bread is shorter than had been supposed. This fact is probably at the bottom of the buoyancy of the Wheat market during the last two or three days. There have been heavy contracts for forward delivery, both on English and Continental account, at about 90c for No. 2 Spring, and 95c@1 for good Red and Amber Winter. The whole range for merchantable Spring is 75c@1, and for Winter, 90c@1.10. Corn has closely followed the course of Wheat, finally closing firm at 40c@50c for inferior to good shipping. Barley begins to attract attention. The crop is undoubtedly shorter than had been expected, and higher prices later on seem to be a foregone conclusion. State Malting is worth \$1@1.20, and Canadian \$1.20@1.30.

CHICAGO, October 19.—Wheat for the week was unsettled, and generally lower, with a good speculative movement. Sales of December at 79½@82½. Corn was weak and easy throughout. Sales December at 33½@33½. Oats were weak, easy. December, 18½@19½. Provisions were unsettled, but in fair demand. Pork for December, \$7.57½@7.80. Lard, \$6.15@6.22½. Closing cash prices: Wheat, 80c; Corn, 34c; Oats, 18½c; Rye, 41½c; Barley, 98c; Pork, \$7.60@7.65; Lard, \$6.12½.

Eastern Wool Markets.

BOSTON, October 19.—The Wool market has been steady with a fair demand from manufacturers, and sales of the week comprised 1,634,900 lbs of all kinds. There is a good average business. The principal transactions during the week were in California and Territorial Wool,

and unwashed and unmerchantable fleeces. Sales of Ohio and Pennsylvania fleeces have not been made to any considerable extent. It is a very quiet market for combing and delaine selections. Desirable lots of combing Wool would command full previous prices, but fine delaines can only be crowded off at some concession, and cannot be quoted at over 37@38c. California Wool has attracted more attention, and business has been larger than any previous week for some time, comprising about 60,000 lbs. Pulled Wools are in steady demand. Sales include Ohio and Pennsylvania fleeces, X, XX and No. 1, at 34@37½; Michigan medium, at 32@35c; New York fleeces, at 31@31½; Maine fleeces, at 33½; combing and delaine, at 37@41c; Kentucky combing, at 31c; unwashed combing, at 27c; Oregon, at 22@29c; Texas, at 25@27c; Territory, at 20@25c; scoured, at 24@62c; super and X pulled, at 27@40c; Spring California, at 19@28c; and Fall California, at 12½@18c.

NEW YORK, October 19.—Though the demand for Wool has been fair during the week, the aggregate amount of business transacted falls somewhat below that of last week. The position of the market has not changed in any important particular. Fall California has met with rather more attention, but choice grades of Spring are scarce, and inferior qualities are not seemingly wanted. Texas, particularly Spring Eastern, is inquired for, and holders generally realize steady prices. For foreign grades the demand has been a trifle better, though the clothing descriptions have been taken chiefly for Canadian and European account.

The sales for the week are 50,000 lbs Valparaiso, at 14½; 4,000 lbs Australian, 37c; 125,000 lbs Fall California, 14@19c; 13,000 lbs scoured do, 52@55c; 30,000 lbs Oregon, 21@30c; 3,000 lbs medium scoured Territory, 45c; 61,000 lbs Spring Texas, 16@23c; 8,000 lbs Fall do, 16c; 50,000 lbs X and above Ohio, 35@36½; 10,000 lbs No. 1 do, 35c; 5,000 lbs medium Pennsylvania, 36½; 10,000 lbs Michigan and Wisconsin, 32½; 5,000 lbs unwashed combing, 27@28c; 3,500 lbs low scoured fleece, 38c; 39 bags super pulled, 29@35c.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK Oct. 2.	WEEK Oct. 9.	WEEK Oct. 16.	WEEK Oct. 23.
Flour, quarter sacks..	49,795	30,256	30,254	45,568
Wheat, centals.....	257,018	388,260	241,046	251,329
Barley, centals.....	61,520	87,267	72,523	84,143
Beans, sacks.....	8,620	4,450	10,364	9,380
Corn, centals.....	1,019	1,613	3,051	2,285
Oats, centals.....	10,271	26,203	12,729	20,750
Potatoes, sacks.....	17,831	19,309	17,539	14,841
Onions, sacks.....	1,621	1,197	1,410	2,363
Wool, bales.....	5,305	5,241	5,763	5,866
Hops, bales.....	854	963	2,888	525
Hay, bales.....	2,087	2,349	2,404	1,798

BAGS.—Bags are unchanged.

BEANS.—There has been a little better feeling, and nearly all sorts have sold a little higher than last week. Our list contains to-day's rates.

CORN.—No change in price.

DAIRY PRODUCE.—The market is stationary at last week's prices.

EGGS.—Good fresh California Eggs are scarce and command high rates. Store and packed Eggs are stagnant, because of over-supply from Oregon, Utah and the East.

FRUIT.—The feature of the market is the scarcity of Limes and Lemons, and consequent high prices.

HOPS.—We note sales of California Hops in this market as follows: 100 bales at 8½; 100 bales at 8c. Emmet Wells says of the New York market for the week ending October 11th: "The market this week has been fairly active, the more liberal arrivals enabling buyers to execute their orders with less trouble. The price continues firm, especially on desirable shipping grades, the supply of which is still quite meager."

LIVE STOCK.—We hear sale of 49 head steers to weigh about 800 lbs each, at \$29 each, sold.

OATS.—Still dull at last week's prices.

ONIONS.—All good Onions have advanced again about 12½¢ @ ctt. Prices now range from \$2.15@2.25. Considerable amounts are being exported. We notice shipments to New Zealand.

POTATOES.—Humboldts and Cnffey Coves have advanced a point. Other kinds are unchanged.

PROVISIONS.—Fresh Meats of all kinds abundant and low; quality generally good. The demand for Meat products is strong and prices unchanged generally, except that Eastern Hams are lower, and old crops hard to sell, being undesirable, as the new crops of Hams are en route.

VEGETABLES.—Our list shows a few changes.

WHEAT.—Our last quotations still represent the range of the market. We note sales: 575 ctt. strictly choice Milling at \$1.72½; 500 good Shipping at \$1.67½; 600 do at \$1.55; 4,100 ctt. fair Shipping at \$1.65; 10,000 good Milling (at Vallejo) at \$1.65; 2,000 fair Shipping at \$1.62½; 950 do at \$1.60; 1,000 common at \$1.52½; 1,200 off grade (Coast) at \$1.45; 500 do at \$1.40; and a lot of very poor at \$1.10 per cental.

WOOL.—There seems to be slow sale for anything except choice free northern Wools which meet fair inquiry. Our quotations cover the range of sales. We note sales: 34,000 lbs San

Joaquin, slightly burry, 10½c; 42,000 lbs Mountain 11c; 200,000 lbs at 11 to 17c according to quality; chiefly, 15c for northern Wool.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., October 23, 1878.

BEANS & PEAS.		Almonds, hd shd lb		7 @ 8	
Bayo, ctt.	2 50 @ 62½	Soft shd.	14 @ 16		
Butter	2 50 @ 50	Brazil	14 @ 16		
Pea	2 50 @ 50	Pecans	13 @ 14		
Red	2 50 @ 50	Peanuts	5 @ 8		
Pink	2 50 @ 50	Silberts	15 @ 16		
Sm1 White	2 50 @ 62½				
Lima	— @ —	Alviso	2 15 @ 25		
Field Peas	1 00 @ 1 52½	Union City	2 15 @ 25		
		San Leandro	2 15 @ 25		
		Stockton	2 15 @ 25		
		Sacramento River	2 15 @ 25		

BROOM CORN.		POTATOES.		PULLED WOOL.	
Old	34 @ 7	California	4 @ 41	Petaluma	8 11 @ 12½
New	41 @ 8	German	6 1/2 @ 7	Humboldt	7 1/2 @ 35

DAIRY PRODUCE, ETC.		BUTTER.		POULTRY & GAME.	
Cal. Fresh Roll, lb	37 1/2 @ 41	Early Rose	62 1/2 @ 1 00	Hens, doz.	7 00 @ 7 50
Fancy Brands	42 @ 45	Half Moon Bay	75 @ 1 00	Roosters	5 00 @ 6 00
Pickle Roll, new	24 @ 27½	Sweet	75 @ 1 00	Broilers	4 00 @ 5 00
Firkin, new	21 @ 25			Ducks, same	6 00 @ 7 50
Western	12 1/2 @ 17			do, Mallard	3 00 @ 4 50
New York	— @ —			do, Common	5 00 @ 7 50

EGGS.		POULTRY & GAME.		POULTRY & GAME.	
Cal. fresh, doz.	40 @ 45	Turkeys	3 00 @ —	White do.	3 00 @ —
Ducks	30 @ 35	do, Dressed	— @ —	do, Dressed	— @ —
Oregon	18 @ 25	do, Eng.	3 00 @ —	do, Eng.	3 00 @ —
Eastern	8 @ 12	do, Mallard	3 00 @ 4 50	do, Mallard	3 00 @ 4 50
do by express	25 @ 27½	Quail, doz.	1 00 @ 1 50	Quail, doz.	1 00 @ 1 50
Picked here	22 1/2 @ —	Rabbits	1 50 @ —	Rabbits	1 50 @ —
		Illare	3 00 @ 3 50	Illare	3 00 @ 3 50
		Venison, lb.	5 @ 8	Venison, lb.	5 @ 8

FEED.		PROVISIONS.		PROVISIONS.	
Bran, ton	15 00 @ 18 00	Cal. Bacon, 11½ lb	11 1/2 @ 11 1/2	Cal. Bacon, 11½ lb	11 1/2 @ 11 1/2
Corn Meal	25 00 @ 29 00	Medium	12 @ 12½	Medium	12 @ 12½
Middlings	25 00 @ 25 50	Light	12 1/2 @ 13	Light	12 1/2 @ 13
Oil Cake Meal	34 00 @ —	Lard	11 @ 12½	Lard	11 @ 12½
Straw, bale	25 @ 60	Cal. Smoked Beef	9 1/2 @ 10	Cal. Smoked Beef	9 1/2 @ 10
		Shoulders, Coverd	7 1/2 @ 8	Shoulders, Coverd	7 1/2 @ 8
		Hams, Cal.	12 1/2 @ 13	Hams, Cal.	12 1/2 @ 13
		Dupees	16 1/2 @ 17	Dupees	16 1/2 @ 17
		Ames	— @ —	Ames	— @ —
		Whitaker	— @ —	Whitaker	— @ —
		Magnolia	17 @ 17½	Magnolia	17 @ 17½
		Reliable	17 @ 17½	Reliable	17 @ 17½

FLOUR.		SEEDS.		SEEDS.	
Extra, bbl.	4 87 1/2 @ 5 37½	Alfalfa	5 @ 14	Alfalfa	5 @ 14
Superfine	3 90 @ 4 25	do, Red	15 @ 16	do, Red	15 @ 16
Grain	3 @ 3½	do, White	50 @ 55	do, White	50 @ 55

FRESH MEAT.		TALLOW.		TALLOW.	
Beef, 1st quality, lb	5 @ 5½	Crude, lb.	9 @ 9½	Crude, lb.	9 @ 9½
Second	3 @ 4	Refined	9 @ 9½	Refined	9 @ 9½
Third	2 @ 3				
Mutton	2 @ 3				
Spring Lamb	5 @ 6				
Pork, dressed	4 @ 4½				
Dressed	5 1/2 @ 6				
Veal	5 @ 7				
Milk Calves	6 1/2 @ 7				
do choice	7 @ 7½				

GRAIN, ETC.		Wool.		Wool.	
Barley, feed, ctt.	15 @ 16	San Joaquin, free.	10 @ 12½	San Joaquin, free.	10 @ 12½
Brewing	17 1/2 @ 19	South Coast, do.	10 @ 12½	South Coast, do.	10 @ 12½
Cheviat	17 1/2 @ 19	Sac. and Northern	13 @ 15	Sac. and Northern	13 @ 15
Buckwheat	1 50 @ —	Mendocino & Hum-	16 @ 17	Mendocino & Hum-	16 @ 17
Corn, White	1 10 @ 15	bold	16 @ 17	bold	16 @ 17
Yellow	1 10 @ 15	Southern, burry	8 @ 11	Southern, burry	8 @ 11
Small Round	1 12 1/2 @ 17	Northern, do.	11 @ 12	Northern, do.	11 @ 12
Oats	1 12 1/2 @ 17	Oregon, Eastern	16 @ 18	Oregon, Eastern	16 @ 18
Milling	1 27 1/2 @ 30	do, Valley	21 @ 22	do, Valley	21 @ 22
Wheat, Shipping	1 62 1/2 @ 65				
Milling	1 67 1/2 @ 71				
Off Grades	1 40 @ 61				

HIDES.		Wool.		Wool.	
Hide, dry	15 @ 16				
Wet salted	7 1/2 @ 9				

HONEY, ETC.		Wool.		Wool.	
Beeswax, lb.	30 @ 31				
Honey in comb.	11 1/2 @ —				
do No. 2	8 @ 9				
Dark	8 @ 9				
Strained	5 @ 5½				

HOPS.		Wool.		Wool.	
Oregon	— @ —				
California	8 @ 12½				
Wash. Ter.	8 @ 12½				
Old Hops	3 @ 5				
do, Barlett	— @ —				
Walla Walla	8 @ 9				
do Chile	7 @ 8				

NITS—Jobbing.		Wool.		Wool.	
Walla Walla	8 @ 9				
do Chile	7 @ 8				

NITS—Jobbing.		Wool.		Wool.	
Walla Walla	8 @ 9				
do Chile	7 @ 8				

NITS—Jobbing.		Wool.		Wool.	
Walla Walla	8 @ 9				
do Chile	7 @ 8				

NITS—Jobbing.		Wool.		Wool.	
Walla Walla	8 @ 9				
do Chile	7 @ 8				

NITS—Jobbing.		Wool.		Wool.	
Walla Walla	8 @ 9				
do Chile	7 @ 8				

NITS—Jobbing.	
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PRICES REDUCED! DIOSPYROS KAKI — OR — JAPANESE PERSIMMON.



This new and popular fruit at prices to suit the times. Seven best varieties. Also Plants of the

VEGETABLE WAX (Rhus Succedanea.)

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Pure Air Heater, Cooker, Fruit
and Clothes Drier,

(COMBINED AND SEPARATE.)

The Combined Heater, Cooker and Drier is a handsome piece of Black Walnut Furniture, with glass doors and lights, and exactly adapted to the wants of every family in every State of the Union, and is sold and used the year round. It is more simple of construction, more durable and ornamental than anything in the heating or cooking line now before the public, finds ready sale, and can be manufactured anywhere by workmen of ordinary intelligence.

It bakes Bread, Cakes and Pies, to any desired tint, without turning or watching, and without danger of burning. No better cooking can be done.

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Made of welded Steel and Iron with continuous calk.

Acknowledged to be the best shoe in the world. Prevents interfering. Lameness usually caused by shoeing entirely prevented by its use. Horses having quarter-cracks, tender feet, and Corns travel with ease. Trial set with nails sent on receipt of \$1.00.

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John D. Billings Patent Horse Shoe Co.,
161 and 163 Bank St., New York.

WEST JERSEY NURSERIES!

WOODBURY, NEW JERSEY.
GIBSON & BENNETT, PROPRIETORS.

100,000 Felton's Early Prolific and Reliance Raspberry.
200,000 Cinderella and Continental Strawberry Plants,
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13,600 ACRES,

Between North Pacific Coast Railroad and Pacific Ocean,
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Schooners make the trip to Drake's Bay in six hours,
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Title—United States patent.

Climate—Unsurpassed for mildness and equability.

Soil—Without exception the richest on the coast.

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With the exception of tropical fruits, anything that
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A large portion of the tract is fine
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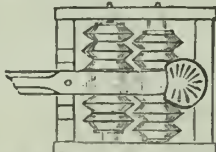
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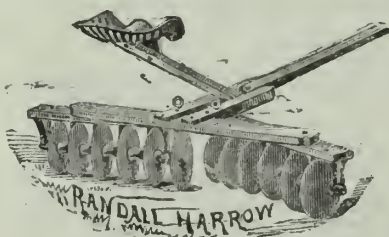
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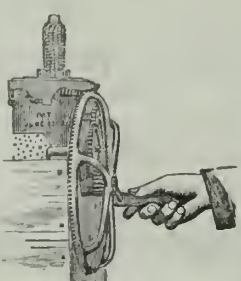
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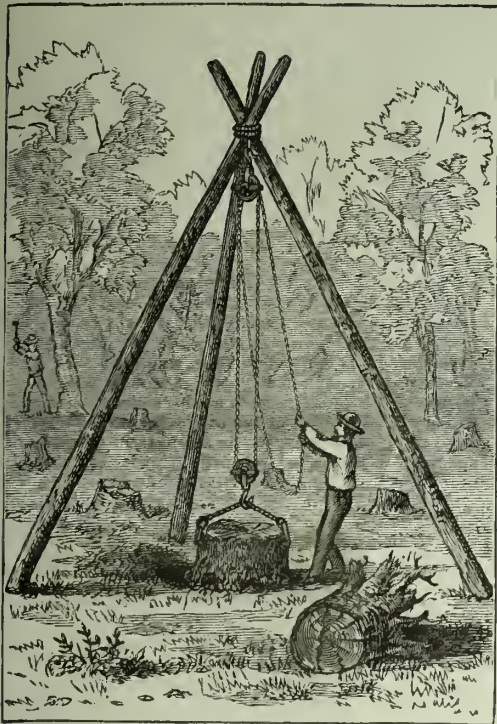
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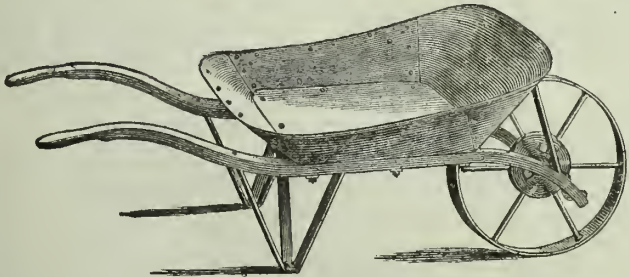
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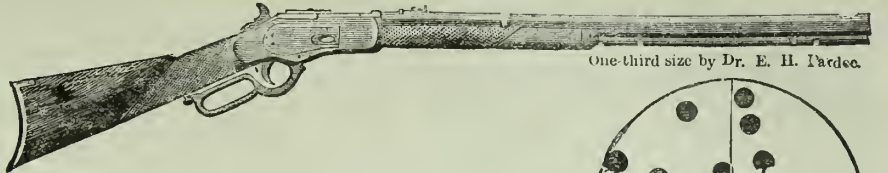
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The Rapidity of its Fire,

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The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting,
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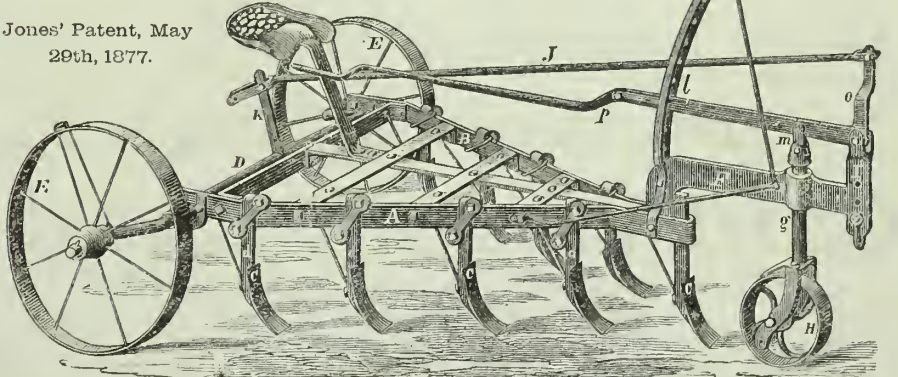
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Prices

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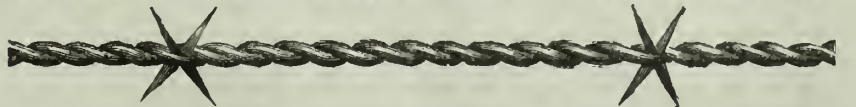
For further information address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Fran-
cisco and Sacramento, Cal.

Our new
DOUBLE-BOX WHEEL

Is a decided improvement, to
which we wish to call the
special attention of those
who would secure the best
and most durable.

Our STRAIGHT CHISEL CUL-
TIVATORS (patent applied for)
are self-sharpening and made
of the best cast steel, with an
improved method of fasten-
ing to the standard, approach-
ing perfection itself.

TO OUR PATRONS AND THE PUBLIC.



Having obtained the control of the SCUTT PATENT MACHINERY on the Pacific Coast, we beg leave
inform you that we are manufacturing the

Scutt Patent Four-Pointed Steel Farbed Fence Wire,

And we claim its superiority for the following reasons, viz: It is plaited, thereby preserving the grain of the metal. Our machines do not twist the single strand. We use steel made by the Seaman & Martin process for barbs. Our wire is made entirely by machinery, and is perfectly uniform. It is plaited by patent process, and is weather-proof. There are no knife points. It is four-pointed, having 128 points to the rod, double the number of any two-pointed wire. Our wire is wound upon strong spools, and can be shipped any distance.

To those needing fencing, and being obliged to transport it long distances by rail and wagon road, we would especially call attention to the difference in cost between barb wire and lumber, as well as in cost of material. It takes 300 pounds single strand for one mile, and less than one-half as many posts as board fences. Please address orders to

GRANGERS' UNION, Manufacturers,

280 and 282 Main Street, STOCKTON, Cal

SWEET
Chewing

JACKSON'S
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NAVY
Tobacco

Awarded highest prize at Centennial Exposition for
fine chewing qualities and excellent and lasting char-
acter of sweetening and flavoring. The best tobacco
ever made. As our blue strip trade-mark is closely
imitated on inferior goods, see that Jackson's Best is
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THE CAPITAL WOOLEN MILLS,

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YOUR NAME PRINTED on Forty Mixed Cards for
Ten Cents STEVENS BROS., Northford, Conn.

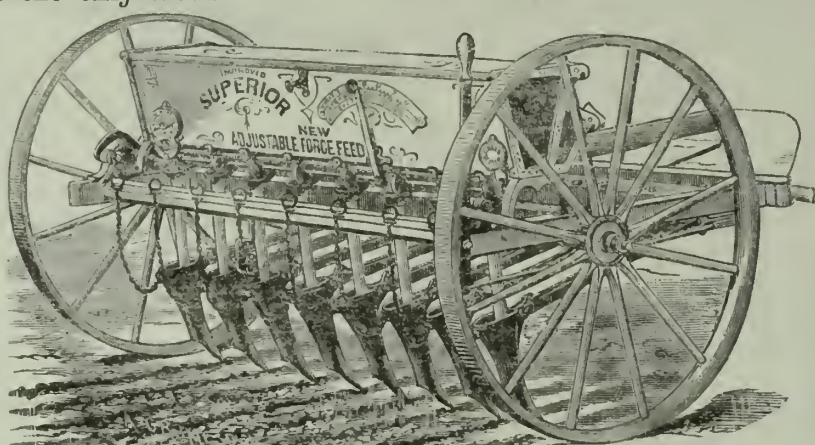
SUPERIOR GRAIN DRILL.

(LATEST IMPROVEMENT ON THE BUCKEYE.)

This DRILL is the only Double Force Feed Continuous Distributer Drill in the World.

We take pleasure in calling your attention to our NEW IMPROVED SUPERIOR GRAIN AND SEED DRILL with Adjustable Force-Feed, New Spring Hoe, Force-Feed Grass Seeder, New Hoe Shifter, Surveyor or Land Measure, New Double-Tree Hitch, continuous Iron Axle, etc., as manufactured for this season's trade. We feel assured that an examination of our New Drill will convince you that it is what we claim for it, namely: The most perfect GRAIN and SEED DRILL in the World.

In the construction of an Adjustable Feed Drill, our object has been to produce a Feeder so perfect that the change of quantity may be made with such accuracy as to secure the desired result, and at the same time preserve all the good features of our former continuous distributor. That we have succeeded all will admit, and not only have we retained all the good features of our former feed, but we have added many other valuable improvements; and have entirely overcome the serious objection to which all other adjustable Feeders are subject, namely, lost motion in the adjusting devices and consequent irregularity in sowing the grain.



With our new Feeder we have continuous distribution of the seed in any desired quantity without any bunching of the seed, or clogging, or balks, or breaking of the grains. Our Improved Machines are so constructed that they can be instantly changed from any one quantity to another. A simple touch of a spring does the work without the possibility of mistake or displacement from jolting or jarring of the machine, and without any lost motion whatever.

LEVER HOE SHIFTER.

Our New Lever Hoe Shifter is a great improvement over any now in use. With it the hoes can be changed from a straight line to a zigzag, and vice versa, with perfect ease, while the Drill is in motion. It is provided with a patent lock bar which renders it perfectly secure and durable. It changes both ranks of hoes at the same time, moving one backward and the other forward, thereby preserving uniformity in the strength of the chains and preventing cramping of the gum tubes.



The cut to the left shows the construction of our

ADJUSTABLE DISTRIBUTER.

It also serves to illustrate the manner of delivering the seed, which it will be observed is from the *internal flange of the wheel*. The flange serves as a bottom for the Distributor, the grain resting upon it, consequently, when the wheel revolves the seed travels exactly with it, thereby insuring the flow of grain in a steady, unbroken stream.

by insuring the flow of grain and seed, and the flange and face of the wheel and the gauge, form a complete measuring channel or throat, through which the grain is carried by the rotary motion of the wheel. The grain resting directly upon the flange of the wheel, is thereby carried forward to the outlet in a continuous stream. The quantity sown per acre is governed by simply enlarging or diminishing the size of the opening in the measuring channel or throat, by means of the adjustable gauge. There is absolutely nothing to cut off the flow of seed, and as every grain of seed is under entire control of the wheel, it follows, as a natural consequence, that it must distribute the seed with greater accuracy, and more evenly, than any Drill not so constructed. Prices:

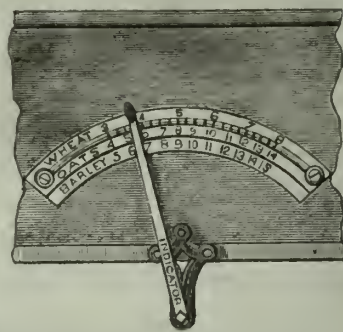
Superior Grain Drill, 6 or 7 inch, 10 ho.	\$115
" " " 6 or 7 inch, 12 ho.	125
" " " 7 inch, 16 ho.	175
" " " 7 inch, 20 ho.	200

Larger Drills made to order, if wanted.

THE INDEX PLATE

Which we use for regulating the quantity of grain and grass seed to be sown to the acre are both located on the rear side of the grain box, where they can always be seen, and the change from any one quantity to another can be instantly made without stopping the team. The quantities of the different kinds of grain and grass seed to be sown are all plainly marked on the indicator plates, and all intermediate changes from one-half bushel of wheat to three bushel of oats, and two to ten quarters of grass seed, can be made instantly. There is no guess work in setting the drill to sow any desired quantity per acre, as the device for regulating the feed are so constructed that there is absolutely no lost motion whatever.

whatsoever. I say in conclusion that it is the only Adjustable Force Feed Drill that has a perfect control of all the Grain, and that it will distribute the grain more evenly and accurately than any other Drill in the World. There is not a single valuable feature to be found on any other Drill that cannot be found on the "NEW SUPERIOR," and it has several very valuable improvements that cannot be found on any other Drill. At this time, I wish to advise the Drills, believing that it will result in increasing your admiration for the



"NEW SUPERIOR."

FARMERS, Buy the Best and Most Improved Seed Drill in the World.

GEM SEED SOWERS, \$35. JONES' GANG BOTTOMS, with Iron Beams, \$10. CAHOON SEED SOWERS, \$17.50 Cash.

THIS DRILL CAN ONLY BE OBTAINED FROM

Baker & Hamilton, Nos. 13 to 19 Front Street, San Francisco.

FURST & BRADLY MAN'FG CO.'S

GARDEN CITY GANG AND SULKY PLOWS.

For Strength, Light Draft and Ease of Handling, we can Beat the World.



Our improved Sulky has taken the lead wherever introduced, and is the only Plow that has given entire satisfaction in reclaiming the Tule Lands of California. Over 100 of these Plows are in use on the Islands of the Sacramento and San Joaquin Rivers. In introducing our Improved Gang, we are prepared to demonstrate by Actual Field Tests that we have the best Gang Plow in this Market.

FURST & BRADLY MANUFACTURING CO.,

GEORGE A. DAVIS, Agent,

No. 327 Market Street, San Francisco, Cal.

PACIFIC RURAL PRESS

Volume XVI.]

SAN FRANCISCO, SATURDAY, NOVEMBER 2, 1878.

Number 18.

Poland-China Hogs.

Our engraving shows two famous boars of the Poland-China breed. These hogs have been considerably inquired after during the last two years in this State, and first-class stock has been introduced from Ohio, where the breed was established nearly 40 years ago. The breed has gained remarkable popularity in the great pork-making States of the Mississippi valley, and much of the heavy hams and bacon which are sent out from the large packing establishments of Chicago, Cincinnati and other cities, is the result of Poland-China blood. The breed seems to have possessed itself to a remarkable degree of the faculty of turning feed into pork; and either for quick and early gain of weight, or for the farther growth until wonderful size and fatness are attained, the Poland-China has demonstrated its fitness.

In this State where the demand is for light bacon and small hogs for the market, one would naturally expect that a smaller breed would be preferred; but the Poland-China by its quickness to take on fat, even when young, has already secured the attention of our swine growers, and has gained ground since its introduction. Although the number of Poland-Chinas now growing in this State is small as compared with the Berkshires, the hogs are widely distributed, and even in the extreme south of the State, Messrs Twogood, Greeves & White, of Riverside, and T. C. Starr, of San Bernardino, are breeding fine specimens of the breeds. There are also growers of the breed in other parts of the State whose names we have not at hand at this moment. This footing which the breed has gained among us, and its popularity elsewhere, entitled it to the recognition which we give it in this issue.

Our illustration shows the boars, "World-heater" and "Peerless," owned by the D. M. Magie Co., of Oxford, Butler county, Ohio. The senior member of this firm, Mr. D. M. Magie, is the originator of the breed, indeed the "Magie hog" is a name by which it is known in some parts of the west. They are also sometimes named from the country in which they originated; but the widest used name is "Poland-China." We are informed by the above firm that Mr. Magie established the breed by his blending of "Poland," "Big China," "Irish Grazier" and "Byfield" blood, during the years of 1837-40. The results which he gained have now been perpetuated by about 40 years of careful breeding, and the "Poland China" has "won its spurs" as an acknowledged breed. Those who breed these hogs at the East

claim excellence for them in these particulars: Their susceptibility to fatten at any age; their capacity for growing very large if desirable; the production of more pork from the same amount of feed than any other breed, and their handsome form and superior style, according to the most approved porcine models. In description and approval of the breed the Magie Co. write as follows: "The pure bred 'Poland-China' hogs are of fine bone, but large size, combining more eminently than any other the excellencies of both large and small breeds, being docile, very good feeders, breeders and sucklers. They sometimes dress 350 lbs at from 10 to 12 months old. From 18 to 20 months old, 500 to 600 lbs. They have long hodies, short legs, broad straight backs, deep sides with square heavy hams and shoulders. For purity of blood and good breeding, these hogs are unsurpassed

concern in this country, as they keep from 300 to 600 head of breeding swine the year round, and, so far as we know, they are the only exporters of American swine for breeding purposes. As Americans, we can but be gratified that the time has come when the outside world calls for American bred hogs, as for other products of the soil.

OCEAN FREIGHTS.—We have low ocean freights on wheat this year, but even in this matter our East Indian wheat growing competitors have the advantage of us this year. It is reported that vessels at Calcutta are offering to take cargoes of wheat to England for 15 shillings per ton, which is about 9½ cents per bushel, and a fourth less than the current rate from New York to Liverpool, though the distance is three times as great. Last year the rate was nearly

The Vintage in Sonoma County.

The present is a favorable year to wine growers in Sonoma county, especially so in elevated localities. In Bennett valley, Mr. Nelson Carr is harvesting nearly as large a crop as in any previous year. His vineyard comprises 20 acres, a small portion of which, however, is not in mature bearing condition. Seventy to 80 tons will be the amount of his sales. He has several foreign varieties growing successfully, although his vines are mainly Mission. His preference for further planting in his locality we understand to be in favor of the Zinfandel for wine. It grows hardy, bears comparatively well and brings \$15 per ton (2,000 pounds) against \$12 for the Mission. The latter, however, gives a greater yield. Mr. Carr's vineyard is most fortunately situated in a thermal

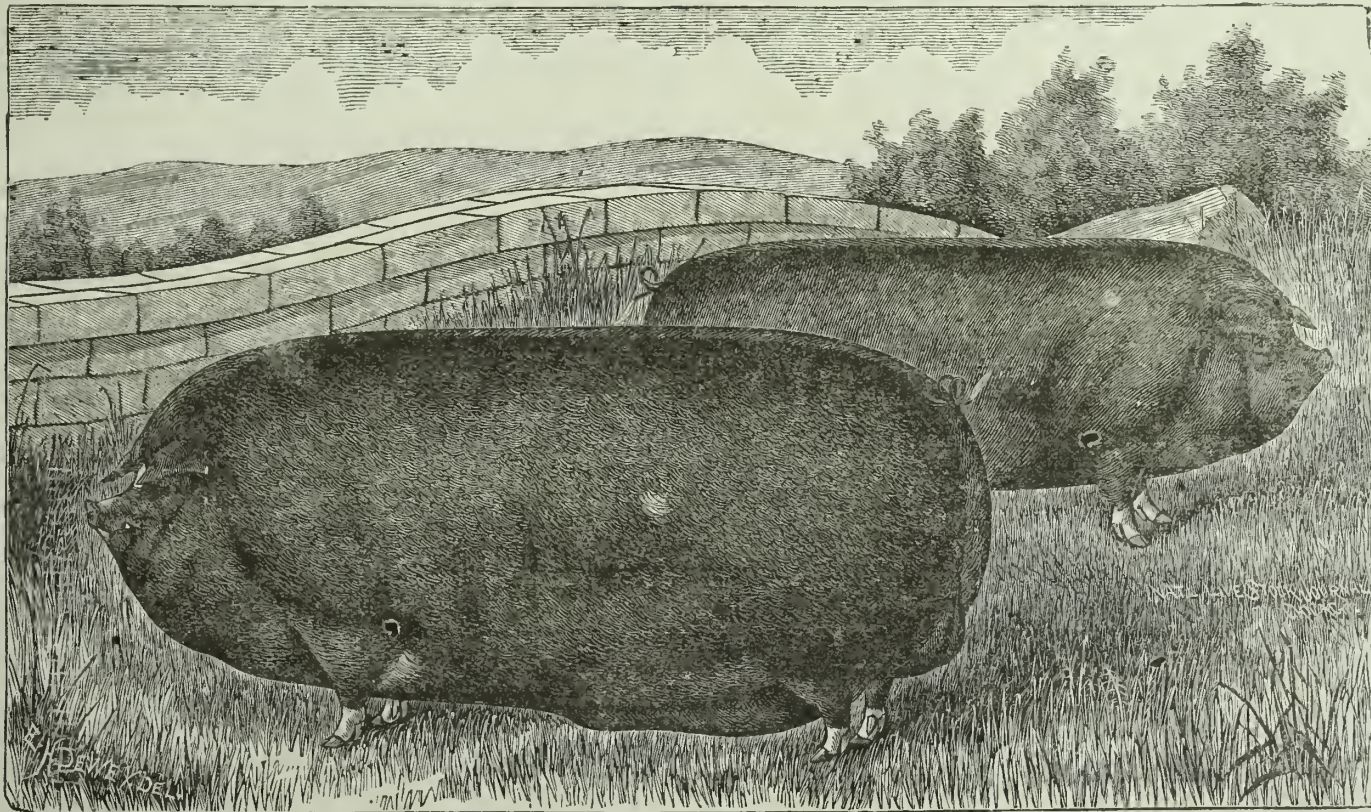
belt with extra protection from cold drafts by an extended point or ridge from the mountain, forming a sort of sheltering wing.

West of Mr. Carr's is the thrifty vineyard of Mr. Talbot, with a good yield.

Adjoining above is the 50-acre vineyard of I. DeTurk, furnishing good yield of both Mission and foreign varieties. Mr. DeTurk has a fine residence and well-cared-for farm, upon which he has labored industriously for over 15 years. His wine manufactory here has capacity for working upwards of 25 tons of grapes in a day. Although empty at the beginning of the season his cellars and store-rooms are soon likely to be crowded with tanks containing some 70,000 gallons.

In Santa Rosa, near the R. R. depot, Mr. DeTurk has a new manufactory, of large capacity, later improvements, greater conveniences. The stemmer and crusher is worked by steam. Forty-eight tons were crushed one day last week, probably yielding upwards of 8,000 gallons of white and red wine. Over 100,000 gallons are likely to be made here this season. To describe the large brick storehouse and other new and extensive improvements here would form the subject of a complete article. The product of the various vineyards in Bennett valley are all, or nearly all, purchased by Mr. DeTurk, as well as from many vineyards in Santa Rosa valley.

RIVERSIDE RAISINS.—Our Riverside friends are to be congratulated over their return of raisins this year. According to reports of the Los Angeles fair, the fruit shown there was as good as the best ever made in this State, as good as the Spanish; in fact, just what we need to win the country to allegiance to California raisins. This is a good point.



THOROUGHbred POLAND CHINA HOGS, OWNED BY THE D. M. MAGIE CO., OXFORD, OHIO.

by any other breed. They are large and fine, and dark colored, have drooping ears, are of very fine style and may be relied on."

The popularity of this breed of hogs in this country has excited a demand for them in other parts of the world. During the last year the D. M. Magie Co. have sold hogs to Canada, to Mexico, to England and Scotland—thus planting the American hog upon the native heath of the famous English breeds, and they have reached out to the uttermost parts of the world by sales to Australia. This last sale to Australia has something of local interest. Messrs. Falkner, Bell & Co., of this city, are entitled to a great deal of the credit due for the building up trade in this breed of hogs for shipment to the British colonies. These hogs, purchased for Australia, during the week they were in the city attracted no little attention from those interested in swine raising. The stock from which they come is of undoubted purity, as it is at the fountain head of the blood. The company who own the animals shown on this page is the largest swine-breeding

four times as high; but at present there are about 100,000 tons of vessels in Calcutta, and very little grain or other freight to export, and they take grain at almost any price, to avoid going back empty. How long this will last we have no data for determining, but if there continues to be enough freight going out to India to make a profit on the voyage on the outward trip from England, we may expect India wheat to be carried for next to nothing. Probably a short Indian crop through the late drouth may be a factor in the present situation.

PUSHING OLIVE OIL INQUIRIES.—Our correspondent at Philadelphia informs us that Elwood Cooper, of Santa Barbara, is there making inquiries how to put California olive oil in the market, and sends one of their most inventive and practical machinists, Mr. Cyrus Chambers, to Europe, to learn particulars as to processes of manufacture. Mr. Cooper is also ardently alive to new products and profits for California agriculturists, as the manufacture of citric acid, etc.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Agriculture in England.

EDITORS PRESS:—This time I have not much, any, good agricultural news to tell you, and perhaps when such is the case, it would have been kinder not to have told you any, for "no news is good news," it is said. Some may think that it is a matter which does not practically affect you, whether farming is good or bad in England; this, however, is not correct, for the commercial relations between even distant California and England are, in these days, so much connected that bad times here cannot fail to reach you there more or less. I should say that the causes which produce bad times here have an influence on the other side of the American continent. This you will feel in diminished prices of those goods you send to us, chiefly wheat.

For two or three years trade in this country has been going worse, worse, worse. We are hoping it has reached the acme of badness, and some among us fancy they can detect symptoms of revival. Be this as it may be, we are going through bad times for farmers. Trade and agriculture act in sympathy, when the one is flourishing the other also is, and when one suffers the other suffers with it. The wonderful stimulus which the Franco-German war gave to trade, and through it to agriculture, in this country, has died away, and the reaction has carried us into a worse position than we were in before; from this we hope we are now beginning to recover. The bad times will have done great good if they have taught us habits of thrift and frugality, for the abnormal prosperity of the first four or five years of the present decade had taught us habits of extravagance—most people thought or seemed to think the good times would last forever, but the wiser ones among us feathered their nests whilst the chance remained.

Badness of trade, by diminishing the earnings of our working classes and so curtailing their expenditure, has at length surged on the farmers, and has made that amount of difference which it is still able to make in prices of farm produce. While a brisk trade cannot raise the prices of food so much, and a dull one cannot lower them so far as they formerly could, all the difference possible has been brought about since 1873. We were then at the height of prosperity, and the reverse, which we are now suffering from so severely, was just about to commence. We have, through the agency of free trade, the food-markets of the world open to us, and fluctuations in prices of food are not so extreme, and are not so much influenced by goodness or badness of trade, as they were before the days of free trade. With an increase of the available area of production, the prices of food are far more influenced by a good or a bad crop in America, than they are by goodness or badness of trade in this country, or than they are by a good or a bad crop of our own. The people must have food whether trade is good or bad, but when trade is bad they are more economical of food, and live on the cheaper kinds of it.

Thus we find that beef is much lower in price than it was some time ago, and grazing farmers will have some difficulty in paying their way this year. Fat cattle are being sold for less money than they cost five months ago. Wheat, too, is lower by two shillings a bushel than it was a year ago. Cheese and butter, also, are much lower in price. These drops are owing to two prime causes—increased production, and badness of trade. The margin for profit is thus taken away, and our farmers are complaining of bad times. The complaint is on the score of lessened prices chiefly, and not on account of poor crops; indeed, crops are above an average this year, and as a rule have been well harvested, but they do not make up for the diminished prices. It seems a strange thing, and is a strange thing, that when the Conservatives are in power in this country trade is always bad. The Liberal party is the one under which commerce, and with it agriculture, flourishes most. Somehow, trade always fights shy of the Conservatives—does not trust them. This is odd, but a fact nevertheless. Several years ago our people were intoxicated with prosperity, and they kicked out the Liberals; now they are suffering and they are beginning to look to the Liberals to restore the lost prosperity. Our taxes are swelling out seriously—the result of the "spirited foreign policy" of the present government. It is true the country encouraged the government in this policy, but now that it is being called upon to "pay the piper" long faces are being pulled, and secular language is being indulged in. Our spirited foreign policy brought us very ominously near to a war, two years ago, with Russia, and we remained on the "nest edge" for nearly two years—how can trade be expected to flourish when the country is in chronic expectation of a war? One war we are soon certain of—with Cabul, in India. This will probably lead us to war with Russia, who is abetting the Afghans—wait and see. This, too, comes of the acrimony and distrust which a spirited foreign

policy always engenders—it is a symptom of the political fever into which the world has been thrown by nations showing a disposition to meddle with other people's business.

All these things are diminishing trade, are raising taxation, are adding to the permanent burdens of the country. Hence it follows that there is a loud and general complaint among farmers. American imports of beef, mutton, pork, cheese, butter, etc., are of course having an effect, but these would not seriously affect farmers if only trade were brisk in the country and the masses of the people were earning plenty of money. So it follows that as we suffer, you suffer too. Depression in England means diminished prices for your grain. When farming is good in England you always get good prices for your productions. But this is not all, a sustained drop in prices is merely an evidence of a decreased demand or of an increased production, and in either case a good deal of farmers' produce is left over—cannot find a market. A large production with correspondingly diminished prices is not a thing to grumble at providing it can all be sold; and a diminished production with increased prices is, on the whole, a great evil; it is lethargy, distrust, stagnation, a trade that does most harm. Meanwhile we suffer and we hope.

J. P. SHELDON.

Sheen, Ashbourne, England, Sept. 24th.

Santa Barbara County.—No. 2.

EDITORS PRESS:—Passing on from Carpinteria toward Santa Barbara over low hills and small valleys, about six miles, brings you to another but smaller park,

Monticito,

Which is also wooded and mostly grown up with bushes and quite uneven, giving rich and varied scenery. It has all the appearances of a genuine pioneer settlement with its clearings here and there. But the plan and finish of many of the dwellings show the wealth and refinement of cultured society. Go into their public school and you find a large and well-furnished room filled with larger pupils, many of them well advanced in their academic course. Parents and pupils all seemed to be proud of their teacher and also of the school. The primary department is in a separate building. These two day schools and a large Union Sunday school make up the educational advantages of this lovely settlement.

At Monticito the old Dana Clark nursery is still flourishing, but now run by other parties. Monticito has no large bearing orchards, as the clearing and culture are of recent date. Enough has been tried to know that nearly all fruits will succeed.

Col. Dismore, one of the older residents, has illustrated what can be done on the high hill-side; the various tropical fruits seem to be growing without much injury from frost. Dates and bananas of various kinds he has growing with success. By climbing the hill he obtained a small irrigating stream and escapes frosts that trouble lower locations. He has a fine orange orchard just coming into bearing. There are some other orange orchards on similar high grounds between Col. Dismore's and Santa Barbara which abundantly prove that the orange, as also other fruits, will thrive on the irrigated hill as well as on the irrigated valley. Those rough, but fairview locations within a few miles of Santa Barbara are being chosen by the bankers and merchants, as well as by the opulent visitors from abroad. Thus the suburbs of

Santa Barbara

Which are extending through the city proper, seems to be making but little advancement and to a stranger it appears, this dull season, to have rather more town than is required for the amount of producing business. The lack of proper facilities to get their surplus products to market is the great hindrance now to the entire county. They can easily supply their local demands, and everything being abundant, except money, they realize small prices for their home sales, and often small profits on that shipped at present rates.

The barley crop throughout the county has been good, but of the large amount of wheat, that never promised better till all headed out, they cut scarcely any. Some of the early sown higher lands escaped the rust and blight.

The wheat blight, following the extreme drouth of last year, is very trying to those recently settled, with small capital and large families. The real heroism displayed by some of these is simply wonderful, as it is admirable. Many have seen reverses before and hoped they might now mend their fortunes. These oft-deferred hopes sicken the heart.

The suburbs of Santa Barbara afford many luxurious building sites, so varied as to suit the most fastidious. The high mesa that lies immediately on and sloping toward the ocean with the lighthouse on its front and the crest of hills in the rear affords some very beautiful suburban farms. Capt. C. P. Lowe occupies a central position on the main avenue of the mesa, which is now occupied by about a dozen residences. S. P. Snow has a more elevated site, high and sheltered, where he is successfully experimenting with varied farming, fruits and berries. The lesson of the season is, "varied crops must be planted."

B. W. C.

Notes from Santa Clara County.—No. 3.

Grape Pruning, Etc.

EDITORS PRESS:—Mr. H. C. Morrell, of Patchen, near the summit of the Santa county range of mountains, prunes the short spur for the new wood of the succeeding year, and the long spur for the fruit the ensuing year, thinking that better results are shown than from any short or even spur pruning. His trees he beads low, which keeps them from sun-burning and saves in gathering the fruit, as most of it can be done without a resort to the step-ladder.

Almond Trees—Young vs Old.

Los Gatos is situated on the narrow-gauge railroad from San Jose to Santa Cruz, on the extreme western border of the valley, and is somewhat celebrated for its fine large almond orchards, some of the best muscats and other table grapes, also, being found here. Mr. Roberts, who has had much experience with the almond and the vine, suggests the planting of young almond trees. Those that were three years old or over, before being set out, have not been found to thrive and bear as trees transplanted much younger. He thinks it advisable to plant in rows as they are to stand, and afterwards bud or graft; at any rate he thinks of making the experiment. It might result in some fine seedlings, as instances of the kind are not unknown.

Guano Instead of Bluestone.

Mr. R. Ringstorf, in the neighborhood of Mountain View, reports the trial of guano the past two years instead of bluestone for the prevention of smut. It gave the wheat a fine stand, and also fully and satisfactorily accomplished the end desired. The grain was put on the floor, after being well soaked, the guano spread over it, and the whole afterwards stirred until thoroughly mixed. It requires sowing by hand, as it sticks to the machine.

Artichokes as Hog Feed.

Mr. J. H. F. Goff has about three acres of red Brazilian artichokes under cultivation on the rich corn and tobacco lands near San Felipe. From present prospects, he expects them to measure from 300 to 400 cents to the acre. They are represented to make excellent hog feed at a time when grass is short, and to be harvested with great economy by the hogs themselves. They require planting but once, as good volunteer crops may be looked for annually, on any soil where corn or potatoes thrive advantageously. Owing to the growing length of these letters, the following

Captions for Paragraphs

Are given, with some slight alterations as they appear in my note book. They are comparatively explicit, and it is hoped they may prove more interesting in this than in a more expanded form:

Indian corn, Patchen, stocks 12 feet average, tallest 16 feet. Mr. A. Berryessa; old trees topped; youth renewed; result, better and larger fruit. Mr. Wyman, Cozy Nook; raccoons, squirrels, etc. (modes of getting rid of them)—a small piece poisoned, better than a whole chicken; they gobble it up, or gobble it down (which should I say?) without thought; nothing to quarrel over, etc.; wonderful instincts—quick to scent and avoid danger; caught at last; strychnine put into small fish—thrown at night into irrigating trenches; the bait takes, or rather is taken; experiment fully successful. Another: A long box trap, double, open at each end; Mr. R. or Mrs. S. enters naturally, as into a hollow log, without suspicion; a rat is smelt, when it is too late to retreat.

Tobacco Culture.

I regret that it is out of my power to impart any really valuable information on this subject, about which inquiries are frequently made. Those best acquainted with it are of the opinion that a publication of their views at this time would be of little benefit to themselves or others. There are difficulties in raising tobacco in this climate, and in curing—very formidable ones. An experiment on a large scale; a comparative failure; dear bought experience; a final success; men of little means, and less experience, not advised to embark. Verbum sat.

A. C. K.

IMPROVEMENT IN BENDING TIMBER.—The bending of hard wood, especially beech, is effected at present by means of hot water or steam, a process somewhat costly as regards fuel, and taking a long time. A patent has recently been taken out in Germany by Bahse and Haendel for making sieve hoops and like objects by a dry process, more cheaply and in shorter time, from cut wood. Two rollers are used, one above the other, and having less velocity, so that the upper acts by holding back, while the lower extends the wood fibers. When the board, thus bent, leaves the rollers, it is fastened in the mouth of the sieve. The upper roller is fluted, the under one smooth. If two smooth rollers were used a very much greater pressure would be necessary.

STANLEY FORESTALLED.—There is said to be a terrestrial globe in the Jesuitic library of the Lyons Lyceum, which is 170 years old, contains, in great detail, the curious system of African lakes and rivers, which the English and American travelers have lately rediscovered. The globe has created a great sensation among geographical savants and amateurs.

THE DAIRY.

Forage Plants.

EDITORS PRESS:—I send you specimens of some of the forage plants that I deem perfect successes for our light, dry soil and hot climate. I will give a brief account of each of these as proven by my experiments, together with all the information obtainable about them.

Panicum Spectabile.

This is one of my recent importations from New Zealand. It grows from three to five feet in height, and is so dense one can hardly force his way any distance through it. I have just received a letter from New Zealand in which Dr. Carl says of this grass: "You will be charmed with it, as all in Australia are, who have grown it. No season there appeared too hot or too dry for it; and where farmers have sowed it around their fields it grows so tall and green, that a reasonable breadth of it will stop a fire from passing in summer; besides it is very valuable forage for all kinds of stock."

When I was gathering plants for our State fair (which never reached there by fault of the railroad) I sent my hired man down to dig a bunch of this; he soon returned with it, and a number of others that I had also ordered, with this remark, "What do you call that very rank, stay-with-you sort of grass? Such roots I never saw on grass; it's come to stay, surely." I had never before examined it, but now I found the earth all about it a mass of roots and underground stems. I deem it a very valuable accession to our forage plants.

Kennedy's Minnesota Amber Cane.

I send two specimens of this, a bunch grown without water in our very dry soil. You will observe the profusion of leaves, and the mass of small, very sweet stalks, all of which are greedily eaten by cows, hogs and horses. A bunch grown from a single seed, where it has been properly cultivated and irrigated, is too big to handle. It would be over a dozen feet long and weigh over 100 lbs. I send you a single stalk cut in two from such a bunch just to give you an idea of its immense growth. This plant is all that can be desired to stand excess of drouth or water, and will produce more cattle, or other stock feed, on less ground, and with less care or culture, than any other plant that has been fully tested here.

Sorghum.

This is nearly as good as the amber cane, except that the yield is not quite so great, nor will it as perfectly stand drouth.

Imphee.

This has some points of superiority over both of the preceding. The principal points of excellence as forage is that it remains longer in leaf-growth, before forming a hard stalk, than either of the others; but when it does form stalks, they are massive, as the specimen that I send will show. It makes the best of syrup, and over 60 lbs of good sugar have been taken from a barrel of the syrup. The amber cane is a hybrid between this and sorghum, and is justly popular throughout the northwestern States on account of equaling imphee in sugar production, while it is as early as sorghum. But here, where the making of sugar or syrup is of far less importance than producing a great amount of stock feed from little land and less labor, it is yet an open question which is to be preferred, imphee or amber cane. Neither drowns out or is in any way injured by an excess of water that completely destroys alfalfa. How much water either will stand I cannot say, but they have both stood, uninjured, a dozen times enough to drown out alfalfa, and they surpass it equally in ability to stand drouth.

Penicillaria Spicata.

This immense grass, sometimes called East India millet, from its having come from the the Cambodia valley, is another valuable accession. I send you a bunch grown from a single seed without water; also a stalk cut in two from a larger bunch, nine feet high and six feet around, too ponderous to handle, grown with water. I have too little yet to have tried its quality as a feed plant, but it is very highly recommended by those who have tried it in southern Europe and elsewhere.

Teosinte.

Botanic name, *Riana luxuriosa*. I tried several lots of seed from a firm of Eastern seedsmen; they all failed. I sent to South America and imported seeds direct. A few of these grew. I wish you could see them now. From each seed there is a bunch of from 100 to 300 stalks, from four to eight feet tall, tender, juicy, and of most luxuriant appearance, while there are such masses of broad, green, tender, succulent leaves as grow upon no other plant. It is a biennial, i. e., it will not produce seed until next year. But if Sylvester, Trumbull, Vincent or others of our enterprising seedsmen will not import a supply of seed to give this plant a well-merited place, wherever men may wish to try it in our State, I will try to secure seed to supply such demand myself, and will make the fact known through the advertising columns of the RURAL.

Dry-Field Rice.

I have tried many varieties of rice. This is the best that I have ever seen. The unmarked

hunch has grown without irrigation, while the other has had only the same irrigation as Indian corn. For feed that will put life into a horse and a gloss upon his hair this is unequalled. For cow feed it surpasses everything else for producing quantity and rich, fine flavor (real gilt-edged), till we have a higher encomium) of cream and butter. Stock eat it in preference to the most succulent-growing harley, wheat or oats; and if allowed to run upon all kinds of grain at will, I know of nothing, except amher cane and imphee, that they will eat interchangeably with it. It can be made to yield 30 to 40 bushels of rice per acre, fully equal to the best imported rice; but it is worthless as an article of food without hulling, and as yet there is no hulling mill on this coast.

Quantities of Seed Per Acre.

Of rice sow about four pounds of seed per acre, in drills 15 inches apart, so as to run a horse hoe between the drills, or it can be sown thinly broadcast where the land does not bake or is not very weedy.

Of sorghum and amber cane five to eight pounds should be sown in same manner for permanent pasture. Stock should not be turned on any of these till they have grown at least a foot in height.

Imphee requires only two and one-half to three pounds of well-cleaned good seed per acre; manner of sowing, same as for the above.

Penicillaria, sow in drills two feet apart, plants one foot apart in the drills.

Teosinte, plant two kernels in each hill; hills four feet apart each way. It will then form a solid mass of stalks the first year.

Panicum spectabile, sow two pounds per acre, in drills 15 inches apart. It will form a solid mass of grass in three months. However thinly it may be sown, it will soon take entire possession of the ground. I have not yet tested its growth except on very dry land. I am speaking of what it will do with only moisture enough to cause its seeds to germinate.

Chufas.

I send a hunch of the genuine article. They are not all fully grown, and about half of them washed off when I put them under the hydrant to wash the dirt out of the roots, but they will give you an idea of how they grow on our Fresno plains. Hang them up till perfectly dry, then by washing, rolling them between the hands, remove the outer pellicle, and eat at once, as a foretaste of the good things in store for the RURAL editors, when in any future autumn they shall favor my ranch on the plains with their presence.

W. A. SANDERS.

Farm near Fresno, Cal.

[This interesting communication from Prof. Sanders was followed by a huge box of freight, containing all the samples which he describes, above, duly marked and ready for inspection. They warrant all that he has said of them. The samples are on view in our editorial rooms (414 Clay street), and should be examined by all in search of new forage plants. Prof. Sanders is doing much good by his introduction and experiments with foreign growths, and he will doubtless have the thanks of RURAL readers for his frank description of results.—EDITORS PRESS.]

FLORICULTURE.

Treatment of Pelargoniums.

EDITORS PRESS :—The pelargonium proper requires quite different treatment from the zoodle or double geraniums, although so nearly related. The pelargoniums proper are the Lady Washington geraniums of the amateur cultivator, and are much finer than the geraniums.

For treatment I would recommend the following: If the plants are unshapely, they should be pruned to some desirable form, such as a cone, tree or fan.

After pruning, place them in a cool situation, on a piazza, or in fact anywhere, so that the rain and extreme sun will not strike them. From now until February next they should receive but little water, not more than three times a week. At the approach of cold weather place them in your greenhouse, or on the windowsill in the house, taking care to let them have as much light as possible.

Repotting will now be in order, giving them during this operation, about one inch more room than they have had. Care should be taken to loosen the roots where they have matted inside of the pots.

Before repotting get some broken pots, pieces of china or stone, to secure drainage, and place them in the bottom of the pots to the depth of one or one and a half inches, before putting in the earth. The soil required is, equal parts loam and leaf mold; a little sand and well rotted cow manure; in such a soil they will thrive remarkably well.

After repotting give them one good watering to firmly settle the earth around the roots. After the first watering, water but once a week, gradually increasing until they show flower buds, which in all probability will be in April next, when they should be watered every day until through flowering.

During the flowering season if watered once or twice a week with liquid manure, they will flower much more prolifically. And now comes the most important part. Do not keep your

plants too warm; as the pelargonium is a plant which delights in a cool, but not freezing temperature.

When well grown there is no more regal plant than a good pelargonium.

W. C. L. DREW.

El Dorado, Cal.

"NATURE, FLOWERS AND FERNS."—Vol. I. of this illustrated work, edited by Thomas Meehan, and published by Prang & Co. of Boston, is now complete and we learn from Eastern exchanges that the success of the publication has been so marked that the publishers will proceed with the second volume at once. We are glad of this, for the 12 numbers which constitute the first volume must have been enjoyed by thousands all over the country. To us, the writing of Mr. Meehan, with its correct botanical data, its touches of poetry, art and interesting incident, is very delightful. The publishers have carried out their part of the work with the fidelity and beauty which is characteristic of their art endeavors.

"VICK'S FLORAL MAGAZINE."—Vick's Monthly must be a grand success. No publication of its hearty and merit could be otherwise in a country of flower growers like this. The colored plates have always been handsome, but the last is best of all. No one who has not seen a copy should fail to send for a specimen to James Vick, Rochester, New York.

"BOTANICAL INDEX."—Mr. L. B. Case of Richmond, Indiana, is a florist who makes his periodical price lists of particular value by publishing with it much fresh floricultural literature. His Botanical Index for October should be read by all who love flowers and are interested in news about them.

Artesian Wells.—No. 3.

In attempting to form some judgment as to whether or not artesian well boring will prove successful in a given locality, the general principle on which artesian wells depends must be borne in mind. Water falling on the earth as rain or snow or whatever, is disposed of in one of three ways: Part flows rapidly over the inclined surfaces, collecting in rills, and rivulets and rivers; part sinks into the earth; part is evaporated. That which disappears into the earth continues its course through permeable material until it meets with some impermeable obstacle. If this obstacle be a rocky cavity the water trickles into it, filling it up until some crevice is found through which the water can continue its always downward course.

If the obstacle met with be the rocky sides of some old watercourse long covered by material washed down its sides or carried into it by other means, the water follows the rocky incline to the bottom of the old channel, and runs down this, to appear at the foot of the old ravine in springs, or to meet other impassable obstacles, and collect in the reservoir furnished by the old river-bed, until it again finds outlet.

If the obstacle be an extended and somewhat regular stratum of impermeable material the water will run along upon it, seeking the lowest portion, and filling up the space or the porous material above the stratum until again some outlet is found. If the impermeable stratum has beneath it more porous material and below that again a similar impermeable stratum, and if the two are bent in such a way as to present their edges upwards so that the percolating water has access to the porous "filling," then the two together form a kind of U tube, which may become filled with water, the water at the bottom being subject to pressure corresponding to the height to which it has risen in filling the tube. The water so caught in porous matter between impermeable strata continues in its "tube" until some break is found, and if no extensive break is met with there is a constant tendency for the water to force its way, under the influence of the above-mentioned pressure, through the upper stratum of the tubes and to appear in springs such as are found often in the center of valleys, at considerable distances from hills. This is likely to be the case only when the water-bearing strata do not reach to a great depth. When the strata are deep they may become swollen with water, having perhaps no outlet, or an outlet at great distance from the outcrop, as, for instance, under the ocean. In the latter case the strange phenomenon of fresh-water springs in mid-ocean occurs.

Considering then the origin of artesian supplies, it is seen that in determining a place for boring, three general questions must be noticed: The configuration of the country, in the locality, the character of the material occurring in the neighborhood, and the climate.

Configuration of the Country.

In studying the configuration of the country, much depends upon whether the aim is to obtain a comparatively shallow or a deep well. As a general thing the shallower well will yield a smaller supply of water than the deeper, and, very naturally, a smaller area of land need be considered and greater attention paid to the configuration in the more immediate neighborhood, when a shallow well is wanted than when a deep well with a probably great and invariable supply is the aim. A sufficiently good, though incomplete, illustration of this may be found in San Francisco. The Mission hills stop short of

the end of the peninsula, leaving the northern part to the sand drifts and lower hills of different formation. The Mission hills are furrowed with numberless little canyons, which, in the rainy season, collect the water and send small streams down to the lower portions of the peninsula. Now, the surest place on the peninsula to bore an artesian well for a moderate supply only, is on the low land opposite and near to the foot of one of these little canyons. If larger and more reliable supply of water is needed, boring had better be made not so close to the hills, but nearer the bay, in the little valleys, as Hayes valley, or between Rincon hill and Ninth street hill, or south of Ninth street hill towards the Mission. In boring these, there is taken into consideration the configuration of greater area than in the previous case. When still greater supply is sought for, and boring is carried into the rock underneath the city, then our petty hills no longer enter the problem, but the dip and condition of strata that may extend eastward under the Coast range and outcrop in the Sierras, demand attention. Another illustration may be drawn from a part of California where few artesian wells have been bored. In parts of Tulare valley the country is covered with low, sandstone hills. These hills are parts of what was once a continuous deposit of strata, covering these portions of the valley, and, where not horizontal, rising gently towards the mountains to the east. The hills were formed by the washing away of parts of this deposit, in some places the washing having been carried so far as to lay bare the granite underlying the sandstone. The sandstone is of the tertiary age, and under favorable circumstances, artesian wells would be expected to prove successful in it, especially as it shows a gentle decline from the mountains. Now, as in the former illustration, in choosing a place to bore a shallow well for a moderate supply, the low hills, the little valleys which they form, and the little canyons on their slopes, would be considered; while in prospecting on a larger scale, the hills would be in part ignored and the broad deposits extending all over the country and rising towards the mountains, would require the larger share of notice.

Shallow Wells.

With regard to the selection of a place to bore a shallow well, for a moderate supply, enough has perhaps been said. At the foot of canyons and in the lower parts of small valleys the boring may be made with most confidence. An almost sure indication that a well will be successful, is the occurrence of springs in the neighborhood.

Deep Wells.

David Dale Owen, in the report of a geological reconnaissance of Arkansas, made in '59 and '60, gives three conditions, which are necessary to the successful boring of artesian wells: First, the fountain-head must be higher than the boring; second, there must be a general dip of the surface from the fountain-head towards the well; third, there must be alternation of porous and impervious strata. These are all self-evident. The first two illustrate well the popular idea of the best place for boring wells. A valley is par excellence the ideal location for a well. But "valley" need not imply the neighborhood of hills. On the contrary, the vaster the tracts of low land, and the more widely separated the hills which form the "valley," so long as the necessary conditions of strata are fulfilled, the better the chance for a deep well to obtain a large and lasting supply. No hills need be in sight, and their absence should not discourage the water-prospector. The larger the circumference of the rim surrounding any valley, the greater, other things being equal, the surface exposed for the catchment of water.

The most favorable condition of strata, as to inclination, is found where they dip on all sides from the rim to the center, forming a basin. They may dip towards an axis, forming a trough. Again, they may dip in but one direction, forming a nearly plane incline, in which case there can be little choice as to location of the borings.

Not only the dip of the strata demands attention; the condition of their outcrop is also of great importance. English engineers distinguish three or four different kinds of outcrop of water-bearing strata. The porous strata that absorb the water may appear on the surface at the top of a hill, the most unfavorable occurrence. They may outcrop on the slope of the hill, and become so worn to conform to the general inclination of the hill, that the water running over their edges may have so great a velocity that only a small percentage can be absorbed. This will vary with the slope. At the foot of a hill, and in a depression, is the most favorable occurrence of the outcrop. The outcrop may be naked, so that the water may be directly absorbed, or it may be covered by drift material; in this case the character of the drift determines the amount of water that may reach the porous strata.

Besides the inclination of the water-bearing strata, and the condition of their outcrop, their regularity and continuity must be looked after. Often a bed of clay beneath a porous stratum is found to thicken up to such an extent that it is impossible for water to find a passage. An upthrust of any impervious material through the water-bearing strata may blast all hopes for artesian water, in an otherwise favorable location. In such cases the land lying between the fountain-head and the barrier is too more likely to yield artesian water, as in some instances may be indicated by the appearance of springs,

which indeed may be the only evidence of the existence of the barriers.

All these details of the configuration of the country may be studied with advantage before attempting to bore wells in an untried region, especially when it is intended to make that outlay which is necessary in sinking to great depths.

In our next we will take up the subjects of the "character of material" and the "climate," giving illustrations relating to the position and condition of water-bearing strata and their outcrop. We shall also consider the outfit necessary for boring wells, and the cost.

Wells Bored and in Progress.

F. W. Morse of Chico, Butte county, obtained for us the data of a well bored on I. R. Bennett's farm, four miles north of Chico. Since the memorandum was handed to him it has been published in the Chico Enterprise. The well was finished one year ago, and proved a failure, reaching a depth of 686 feet without finding artesian water. The data are as follows: soil, 16 feet; gravel, 10 feet; yellow clay, 164 feet; gravel, 6; earth the color of ashes, 10; cemented gravel, 3; sandstone, 20; ash-colored earth mixed with white streaks resembling burnt or slaked lime, 40; brown hard-pan, 231; quicksand, 2; very hard basalt rock, 20; soft stone resembling blue clay, when pulverized, 80; quicksand, 1; sandstone, 30; pipe clay, 10; cemented gravel, 3; sand, 10; quartz gravel, 2; blue clay, 10; washed sand, 18; total, 686 feet. The bottom of the pipe is now in sand and gravel. We sunk the pipe five feet the last half day that we worked.

This is the only artesian well that has been sunk in the neighborhood. Plenty of water is obtained from surface wells at a depth of 20 feet, and in many cases a good supply is found at six or eight feet. The strata are often different at places only 20 or 30 feet apart. The water-bearing strata are principally sand and gravel.

J. W. A. W. writes us that there are only four flowing wells in Tulare county, one near Tipton of which so much has lately been published, and three others. This well struck water at 280 feet below 6 feet of sandstone. It went 30 feet deeper through clay and four gravel beds, each of which gave water. It yields 86,000 gallons of water, containing only six grains of solid matter to the gallon. The three other wells in the county are on John Heilman's place near Lemoore. There is a good deal of pipe being made at present in San Francisco for wells near Bakersfield. Pipe is also being shipped to the San Joaquin valley and to Mendocino county.

W. G. A. writes us from Gold Hill, Nevada: At Battle Mountain, Lander county, on the line of the C. P. Railroad, there are several artesian wells. The water is cool and quite free from deleterious chemical substances. The borings are about 150 feet in depth, and the geological strata are mainly volcanic detritus; clay strata, gravel and sub-alluvium.

At Elko on a bluff, or second flank of the Humboldt, the citizens are now boring for water. They have good machinery and are confident of success. At present the auger has reached the depth of over 400 feet. The valley of the Humboldt at that point is covered by strata of gravel, sand, clay and drusy carbonate of lime. The first artesian well in Nevada was bored in 1870, on the farm of S. C. Nevers, near Carson. Said well was 18½ feet deep, and the stream shot out 7½ feet above the surface, and is flowing yet with unabated vigor, sending up a stream sufficient to supply all demands for household purposes and a surplus equal to the wants of a large number of acres for irrigating purposes.

Prof. W. F. Stewart, State Senator from Storey county, introduced a joint resolution in the Senate of the last Nevada Legislature, which passed the Senate but failed in the House, memorializing Congress to make liberal donations of land in the arid valleys of this State to parties who were successful in causing a flow of water to the surface. There are millions of acres of as fine soil as can be found in any portion of the world, covered with luscious, succulent grasses during the spring and forepart of the summer, and not a hoof of stock to eat it because there is no water. These valleys are surrounded by mountains serrated by deep canyons, which if dammed at proper intervals, a supply might be stored up for summer use. This is one of Prof. Stewart's plans to make inhabitable the heavy rich valleys in this State, that are now worthless. Stewart intends to introduce his resolution again this winter.

MOVEMENT OF TEMPESTS.—M. Faye has studied tempests as moving whirlpools with vertical axes, comparing them to the eddies of streams. In the course of a river, as soon as there is any difference of velocity between contiguous portions of water, such eddies tend to be produced. As soon as the tendency becomes effective, it can be mathematically shown that the angular velocity of rotation increases in the inverse ratio of the square of the distance from the axis. Moreover, although the eddy is plunged in the mass of the surrounding water, it will remain isolated, as it were, by the surface of its own, which is a surface of revolution around the vertical axis, with the concavity of its meridian generatrix turned downward.

THE Paris Academy of Sciences has elected Mr. Darwin a corresponding member of the geological section, and Prof. Asa Gray a corresponding member of the section of botany.

THE wheat hauled in Roseburg, Oregon, this season will probably amount to 125,000 bushels.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Bennett Valley Grange.

Saturday, Oct. 19th, we visited this Grange, the first organized in Sonoma county, located in Bennett valley, seven miles nearly due east from Santa Rosa. Worthy Master, I. C. Steele, being in Santa Rosa, and hearing of the meeting, like a true Grange patriarch, could not withstand the temptation to give his valuable time and attention, and came unannounced to the meeting. He received a hearty welcome, as we believe every true Granger will who comes among the noble patrons of Bennett valley. They have a fine Grange hall, built by a few patriotic members. It is "set on a hill," and "founded on a rock," figuratively speaking, at least. In front of the hall is a splendid grove of beautiful madrona trees, whose white May blooms and red autumn berries lend a charm to the situation. Beyond these is a wide-spread view of the charming mountain-like valley, framed as it were in a border of beautiful rounded hills and varied peaks.

Worthy Overseer, Nelson Carr, officiated in absence of Worthy Master I. DeTurk. Brother Steele spoke repeatedly in his usual spirited and sensible way. Brother S. T. Coulter, Past Master of Santa Rosa Grange, made his good and just hits. Other wide-awake Grangers were present from Santa Rosa. Lady Assistant Steward, H. L. Carr, (well known and esteemed in our State Grange), evinced a happy way of making strangers and members feel acquainted, and immediately at home with each other, in a manner which is worthy of wide imitation.

The harvest feast was a bountiful repast and well presented, to the credit of the able and liberal sisters who prepared it. Bro. Coulter truly remarks: "It is provoking to have one's appetite to go back on 'em upon such an occasion." We saw no such victims, but, on the contrary, observed the grandma of 80, joyfully feasting with children of from one to 50 summers. Past Master Whittaker distributed among the members present (for experimental purposes) several small sacks of seed wheat, received from the U. S. Agricultural Bureau. The resignation of Secretary Aaron Lacque, a faithful and efficient officer, was accepted by a complimentary vote of the Grange. He soon removes to Fresno county. Bennett Valley Grange numbers about 40 members. It is second in life and influence to but few, if any other Granges in the State. The valley is well divided up into medium sized and generally speaking, well tilled farms. The crops are quite diversified and certain. Wheat, barley, corn, grapes and other fruits are the leading products. We shall speak of Santa Rosa Grange next week.

Lukewarmness.

In the last *Patron*, Sister Maria B. Landers, of Alhambra, has an excellent article on the above subject, from which we quote as follows:

This lukewarmness may arise from very different sources—selfishness and ambition being the most general cause. Speaking of our own Order, how many have joined to further their own ends, and, as a matter of course, their minds are in this groove of thought that will bring about their selfish desires; hence, when the body ruling does not fall into this self-proposed line, they shrug their shoulders, say little or nothing, but look unutterable somethings; this in law, intangible something is cast about promiscuously, caught by a criticising, doubting and wavering brotherhood, and finally the tiny molehill of doubt becomes a mountain full of abysses and fastnesses where the lukewarm may safely barricade themselves, and hurl the most savage and vindictive artillery of the revengeful human mind against a body that is powerless, because there is no tangible enemy with which to cope.

Brothers and sisters, in our great agricultural work there is much labor, and much of it, too, only to bring as its reward a consciousness of well-doing. Thankful are we to say there are always some broad shoulders, willing hearts, and ready, helping hands to rely upon, while we must, at the same time, concede that there are those in our midst who take refuge in the critical garb of the fault-finder only to cover their indifference, selfishness and lukewarmness of principle.

Oh! doubting, wavering, faltering brother and sister; you that say, "I'll not go to Grange to-day—there is no special entertainment, and I cannot read, speak or write well enough to interest anyone—why should I go?" Oh! discontented Patron, did it ever occur to you that those silent brothers or sisters who are in their place day after day—never, perhaps, singing, reading or speaking—"does a mighty, though a silent work in the Grange field?" (many times even greater than the noisy, voluble ones, that are heard every day). Their very presence is an inspiration; there is a responsive smile, approving nod, and a quietly mild and twinkling eye that tells of a heart whose every throb is responsive to every good and pure thought, even though it be expressed in the crudest form; the very shake of the hand; their free, hearty and joyous laugh, is to the working brotherhood a revelation of good cheer that brightens the time between Grange days. Oh, good, silent

brothers and sisters, your very presence is a fulfilling of the law, "do ye good unto each other;" therefore, I conjure you, ever be present, even in your silent armor, and let it be invulnerable to the arrows of the fault-finding, lukewarm brothers around you; that you will prove a bulwark of strength against home and foreign thrusts to the Order that christens you as among the favored of the House of Labor.

Report of the State Grange Committee on Officers' Reports.

Worthy Master:—We, the committee appointed to examine Officers' Reports, have examined the Secretary's report, and, after careful examination find it to be correct and recommend its adoption. And, further, we find that, notwithstanding the multiplied and arduous duties heaped upon our Worthy Secretary, they have been most efficiently performed, for which we recommend the thanks of the State Grange.

We have also examined the Treasurer's report and, after careful investigation, find it to be correct, and recommend its adoption; and finally beg leave to offer the following in regard to the Lecturer's report:

We have carefully examined the same and find that the amount subscribed to the Lecturer's fund, from all sources, are as follows: Grangers' Bank, \$100; Business Association, \$100; California Farmers' Mutual Fire Insurance Association, \$100; Patron Fund, \$200, and \$568.25 from the different Granges, given in the items in the Lecturer's report, making a total of \$1,068.25. The amount expended by the Worthy Lecturer, of that fund, is as follows: 130 days' time, at \$3 per day, \$390; traveling expenses, \$681.45. Total, \$1,071.75 leaving a balance of \$3.20 in favor of the Lecturer.

We recommend for the coming Grange year that all Granges respond freely in their contributions to the Worthy Lecturer's fund, as well as individuals who feel they can do it. We cannot pass without favorably noting the liberal manner in which our four Grange institutions have contributed to the said fund—the Patron, Grangers' Bank, Business Association, Farmers' Mutual Fire Insurance Company—and hope, until the fund is otherwise provided for, they will not forget so important an arm of the Grange organization.

We fully endorse the recommendations of the Worthy Lecturer, both as to his policy of this worthy body giving a platform of principles on State policy, and that means be provided him with which to finish his begun work of State visitation.

Feeling the great importance of sustaining the organ of the Grange, *The Patron*, we earnestly recommend that each Master use his influence to sustain it.

In conclusion, we recommend that the whole report be spread upon the minutes of this State Grange meeting for future reference.

All of which is most respectfully submitted.

ALEXANDER HENDERSON,
JOHN McMULLEN,
H. L. CARR.

WOMAN SUFFRAGE.—The experience of the Patrons of Husbandry in the work of their Granges, to which women are admitted, has converted nine-tenths of the Grangers into advocates of woman suffrage. In the language of a resolution unanimously adopted by the State Grange of California at its last session, they believe that the social, moral and financial standing of the people would be greatly benefited by extending the right of franchise to women. Certainly; why not? Women have as high a sense of honor as men—as much love of country, and more regard for home which is the foundation of all good government. Wherever the family is considered the most sacred of institutions, wherever home life is revered, and real not sham marriage is esteemed the highest and holiest of all human relations, there is invariably the best and purest government. A very close connection exists between the degeneracy of men in public life during the last twenty years and the decay of home life. That marriage has become year by year less respected and more frequently avoided by the young men of America, is one of the worst signs of the times. Women are the natural preservers of the family relation—the high priestesses in the sacred temple of home; they purify and ennoble every relation of life which their influence is allowed to reach; they are the pillars of the church, the promoters of education, the teachers of the rising men—and if they are fit to mold the characters of those who become voters, why are they not fit to vote themselves? Would they not purify politics and promote honesty and efficiency in the public service? We believe they would.—*Sacramento Bee*.

THE STATE GRANGE.—At the late meeting of the State Grange, all proposals to change the Constitution and by-laws of the State Grange, were negatived. During Saturday evening, G. W. Hancock, President of the Grange co-operative store in Sacramento, gave some very interesting and encouraging facts concerning that institution, which is firmly based, mainly on the Rochdale (English) plan. Bro. Smith, of Ferndale, Humboldt county, also showed up the success and benefits of his Grange co-operative store. Bro. Bobo made a gratifying report of Grange business experience in his section of the State of Nevada.

Notes from the "California Patron."

In the report of the State Grange by the Worthy Secretary, the following allusion is made: Saturday evening was set apart for a "good old-fashioned Granger love feast;" it proved to be a most enjoyable occasion, and the regret was expressed that these reunions did take place on Wednesday or at furthest on Thursday evening, so that all or nearly all attending the State Grange could be present at one of these Grange reunions. It would be better still to have two evenings, during each session, set apart for those feasts.

On Friday evening of the State Grange meeting, the 5th degree was conferred on a class of 68 brothers and sisters.

Appropos of the consolidation of Morro and Old Creek Granges in San Luis Obispo county, the Worthy Secretary gives the following general information on consolidations: Application for permission to consolidate must be made to the Master of the State Grange, and his consent obtained. One of the consolidating Granges shall then vote to surrender its charter and to consolidate with the other; and the other must vote to receive all the members of the surrendering Grange. A copy of each vote, duly authenticated, must be transmitted to the Secretary of the State Grange, together with the surrendered charter.

The election of officers in subordinate Granges should take place annually, on the first regular meeting held in December, and installed at the first regular meeting held in January, or as soon thereafter as may be practicable. "In District Granges, at such times as each District Grange may determine. All elections to be by ballot. Any fourth degree member, in good standing shall be eligible to office or receive the degrees in the County, District, State or National Grange, within whose jurisdiction such member may reside, but shall not be entitled to vote. Vacancies by death or resignation to be filled at special election at the next regular meeting thereof. Officers so chosen to serve until the annual meeting."

Resolutions were lately adopted by Enterprise Grange, No. 38, to the memory of Sister Ida A. Slaughter: "A faithful member, an affectionate and beloved wife, and a Christian woman."

DIVIDEND.—EDITORS PRESS: Please give notice that the Board of Directors of the Grangers' Co-operative Business Association of Sacramento Valley has declared a dividend of one per cent. per month on all capital stock paid in from the time issued, the same payable at the Secretary's office, K and 10th streets, Sacramento.—Geo. Rich, Secretary.

AGRICULTURAL NOTES.

California.

COLUSA.

THE COMING SEASON.—*Sun*, Oct. 26: An immense area has been sown to wheat in this county—more than ever before at this season of the year, and the work continues. And it is all put in in good order. The land is in excellent condition, and in many places is almost wet enough to sprout wheat. A very little rain will make good crops. Ten inches properly distributed will make big crops. Our farmers are therefore well contented with the prospect.

EL DORADO.

MOUNTAIN FEED.—*Republican*, Oct. 24: The dairy and stock men generally have got pretty much all their stock out of the mountains now, and it does not look as well as usual, and some of it is in poorer condition than we have ever seen stock come out of the mountains. We learn that feed has been unusually short, and the storm ten days ago caught most of the stock in from six to fifteen inches of snow, causing them to be started and driven for two or three days on very short rations, giving them a very gaunt appearance upon reaching this locality. Unless we are favored with early feed in the lower foothill range and the valleys, much stock must perish before spring, as there are many in the stock business yet who make no provision for such emergencies.

CALIFORNIA SWISS CHEESE.—With the compliments of Rinaldo Philippi & Co., Garden Valley, we are in receipt of a nice piece of Swiss cheese, of their make, which took the premium at our county fair. We consider it fully equal to the best Eastern make, and we flatter ourselves that we are a pretty good judge of the article. Rinaldo had evidently read our local about being obliged to take to a plain diet, and desired to help us out. We will try it a while, but will bet we will come off from it fatter than ever. They have on hand about ten tons of it, of their own make, which they will soon ship to the State of Nevada, where they find a ready market for it at remunerative prices.

LOS ANGELES.

FLAX.—*Anaheim Gazette*: The experiment of raising flax in this vicinity has demonstrated that it can be made one of the most profitable crops. Mr. Amos Wright made some very thorough tests the past season. He planted the seed in different months and in different kinds of soil, and by careful observation he now knows exactly the proper time to plant and quality of soil necessary to secure the best results. In some kinds of soil it yielded ten sacks to the acre and in others only one sack. The average weight of the sacks was 110 lbs. At 3½ cents per pound (the price it brought in San

Francisco), the amount per acre would be \$35.75. This proves that it is a profitable crop, and as there are few farms which do not embrace some extent of ground adapted to the successful growth of flax, it is the sheerest folly to longer ignore its culture. At the Horticultural fair last week, Mr. Geo. H. Peck, the agent of the Pacific Oil and Lead Works, had on exhibition samples of flax seed grown in Los Angeles county and Oregon. The difference in size and general appearance was very marked. That grown here was large, plump and glossy; the Oregon flax, on the contrary, was small, shriveled and lusterless. It may have been very good flax, but it was manifestly inferior to the Los Angeles article.

SAN JOAQUIN.

PREPARING THE LAND FOR ANOTHER CROP.—*Independent*, Oct. 26: Many of the farmers of this county are already preparing their land for another crop. The summer-fallowed land is being harrowed or cross-plowed, so that it will be in condition to receive the seed before the severe storms of winter should commence. Land that is to be left for a volunteer crop is being dragged with brush, and that which is to be plowed is being burned over to remove the heavy growth of stubble which would otherwise greatly retard the progress of the plow. The theory so often advanced by agricultural editors that the straw should not be burned, but allowed to rot upon the grounds, is not approved of by some of our best farmers. In this dry climate straw will not readily rot, and the heavy growth of stubble cannot be plowed under, and much of it must therefore remain upon the ground, without being of any benefit whatever to the growing crops. It is claimed that the ashes from the burned stubble are of immediate benefit to the land, while the straw is a detriment, unless it can be evenly spread over the surface of the ground after the same has been thoroughly cultivated and received the seed. There is every reason to believe the area of land under cultivation in this valley will be greatly enlarged this coming year, provided the season should prove favorable.

SEEDLESS RAISINS.—*Herald*, Oct. 26: Three years ago Mr. W. B. West, who is now traveling through Europe for a trip in search of health as well as information concerning grapes and wine making, resolved to try the experiment of curing raisins from the seedless Sultana grape. He planted about eight acres to this kind of grape, and this year he first gathered the grapes and cured them. We were shown to-day the result. It was 500 pounds of fine, tender, juicy and seedless raisins, equal to any that are imported.

SANTA BARBARA.

THE SEASON.—EDITORS PRESS: Moderate rain of several hours, October 14th. I believe we are mostly ready for the rains, although some people never will be ready for anything. Our crops are mostly moderate; we think we had too much rain last winter; perhaps beating the ground down too much, for, in some cases at least, the ground dried out and baked sooner than it did in years of less rain. Most kinds of fruit fair, except grapes badly mildewed, and peach trees troubled with curled leaf, although the trees made a good growth late in the season.—S. P. S.

TULARE.

GOOD WORK.—*Delta*, Oct. 26: There are upwards of fifty teams at work on the Deer creek ditch, and it bids fair to be completed in time for use this winter. It is calculated to carry one hundred feet of water, and those who have been on the works say it is the best constructed ditch, so far, in this part of the State. The rain of last week started the water down the ditch, and a dam had to be thrown across the head of it. The work in the bed of the creek, for the purpose of reaching the bedrock and putting in a blind ditch to raise the underflow of water to the surface, has been suspended for the present, so large a flow of water having been struck that it was found impossible to make any headway with their present appliances. After the construction of the ditch it is the intention to procure a pile-driver, and complete this portion of the work. It is to the credit of the settlers on Deer creek that, in this enterprise, they are working as one man. A number of new settlers have located on the creek since the commencement of this enterprise, and there is still some good vacant land awaiting occupants.

VENTURA.

EDITORS PRESS:—Oct. 14th was cloudy all day. In the evening it began to rain; the first of the season. It continued all night. As nearly as I could make out about three-eighths of an inch fell. It was followed by hot east winds, so that no vegetation started, although it damaged the dry feed somewhat. Wine making on the celebrated Carmelos ranch, began last week. They have a large yield of grapes this year, and make some splendid wine. They recently sold all their old stock of wine to a wholesale house in New York. They have a large stock of brandy on hand. The agent from New York said they had a large stock of California brandy on hand at present, but if they wanted any more would write them. The corn crop is being harvested as fast as possible in anticipation of early rains. Beans are being threshed and they turn out very well. Heavy fires have been raging on the San Fernando among the apiaries, destroying a large amount of property and bee pasturage.—CONTRIBUTOR, Scenega.

Southern District Agricultural Society.

The fair of this society was duly held during the week ending October 19th, at the Agricultural park, Los Angeles. We compile from the local papers the awards of leading premiums:

Horses.

Thoroughbred Horses—Stallion, Hockhocking, A. J. Hutchinson; 8 yrs old, Wildwood, J. W. Adams; suckling colt, Uncle Tom, J. W. Adams; mare, 4 yrs old, Peggie Ringold, J. W. Adams; 3 yrs old, Ellen Alanah, G. A. Johnson; 2 yrs old, Tomasita, G. A. Johnson; 1 yr old, Sespe, H. M. Johnston; 4 yrs old, mare and colt, Lulu Jackson, 2d prem, H. M. Johnston.

Families—Lulu Jackson and 2 colts, H. M. Johnston; dam, other than thoroughbred, Barbara and 2 colts, H. M. Johnston.

Graded Horses—Six yrs old, Emperor Second, H. M. Johnston; 3 yrs old, Sultan, L. J. Rose; 2 yrs old, Exile, F. M. Slaughter; 1 yr old, Len Rose, H. M. Johnston; colt, Four Aces, H. M. Johnston; mare, 2 yrs old, Grayling, H. M. Johnston; 1 yr old, Iska, H. McGregory.

Horses of all Work—Four yrs old, Rodney, A. Haines; mare, 4 yrs old, Belle, A. Haines.

Draft Horses—Four yrs old, Emperor Second, H. M. Johnston.

Roadsters—Stallion, 2 yrs old, Exile, F. M. Slaughter; gelding, 4 yrs old, San Diego, H. M. Johnston; mare, 2 yrs old, Grayling, H. M. Johnston.

Carriage Horses—Echo Boy and Doc, E. Dupuy.

Teams—Enterprise and Gloster, Dr. K. D. Wise.

Saddle Horses—Gelding, Careless, Mr. Sanchez; yearling horse colt, Romero, H. M. Johnston.

Sweepstakes—Stallion, Erbo, L. H. Titus; mare, Peggie Ringold, J. W. Adams; stallion, Hockhocking, 2d prem, A. J. Hutchinson; mare, Lulu Jackson, 2d prem, H. M. Johnston.

Mules—Best span, Lady and Small Hopes, F. M. Slaughter.

Cattle.

Durhams—Bull, 4 yrs old, May Duke, W. R. Steele; 2 yrs old, Wiseton Duke, J. Waters; 1 yr old, First Duke of Tulare, H. M. Johnston; bull calf, Bernardino Wiley, James Waters; cow, 4 yrs old, Ida, James Waters; 3 yrs old, Empress Fourth, James Waters; 2 yrs old, Jessie Lee Second, James Waters; 1 yr old, Tenth Bell of Chico, H. M. Johnston; cow and calf, Fourth Gloster's Pride, James Waters; heifer calf, Credit, H. M. Johnston; bull, 4 yrs old, Union Duke Second, 2d prem, J. H. Myers; 1 yr old, Mason Prince, 2d prem, James Waters; bull calf, Tom Scott, 2d prem, W. R. Steele; James Waters was also awarded 5 2d premiums for cows.

Jerseys—F. J. Barretto was awarded 17 different premiums for his Jersey stock besides the sweepstakes named below.

Graded Cattle—Two yrs old, Patience, J. D. Durfee; 1 yr old, Rosa, H. M. Johnston; heifer calf, Lengthy, H. M. Johnston; 2 yrs old, Charlotte, 2d prem, J. D. Durfee; 1 yr old, Icele, 2d prem, H. M. Johnston; heifer calf, Snow Drop, 2d prem, H. M. Johnston; pair yearling steers, H. M. Johnston, hon mention.

Sweepstakes—Bull, any age or breed, Wiseton Duke, James Waters; May Duke, 2d prem, W. R. Steele; cow, any age or breed, Fourth Gloster's Pride, James Waters; Beauty of Ipswich, 2d prem, F. J. Barretto; bull and 3 calves, F. J. Barretto.

Swine.

Essex and Berkshires—Boar, Saxe, F. M. Covert; St. Charles, 2d prem, J. D. Durfee; 6 mos old, Whistler, A. J. Hutchinson; breeding sow, Betsy Jane, A. J. Hutchinson; sow, 6 mos old, Fanny, A. J. Hutchinson; pair pigs, H. M. Johnston.

Poland-China and Chester Whites—Boar, 2 yrs old, Rob Roy, Jr., Mayhew & Everett; under 2 yrs, Champion, Mayhew & Everett; breeding sow, over 2 yrs, Maud, Mayhew & Everett; sow, 6 mos old, Maggie, Mayhew & Everett; boar, 6 mos old, Black Prince, A. J. Two good; pair pigs, under 10 mos, A. J. Two good.

Sweepstakes—Boar, any age or breed, Rob Roy Second, Mayhew & Everett; sow, any age or breed, F. M. Covert; pair, any age or breed, F. M. Covert; family, same breed, F. M. Covert.

Poultry.

Eleven premiums to W. Niles for different breeds; 3 premiums to C. H. Eason for same.

Special Silver Prizes.

Carriage Span—E. Dupuy, silver goblet; road team, Dr. K. D. Wise, silver goblet; saddle horse, Mr. Sanchez, silver goblet; stallion, sweepstakes, Mr. Sanchez, silver pitcher; 2d best stallion, sweepstakes, A. J. Hutchinson, silver pitcher; mare, J. W. Adams, silver pitcher; 2d best mare, H. M. Johnston, silver pitcher; best Durham herd, James Waters, silver pitcher; 2d best Durham herd, H. M. Johnston, silver pitcher; best herd Jerseys, F. J. Barretto, silver pitcher; best Jersey bull and 3 of his calves, F. J. Barretto, silver pitcher; 2d best Jersey cow, sweepstakes, F. J. Barretto, silver pitcher; best bull, sweepstakes, James Waters, silver pitcher; 2d best bull, sweepstakes, W. R. Steele, silver pitcher; best cow, sweepstakes, W. R. Steele, silver pitcher; total value of silver prizes, \$535.

Southern California Horticultural Fair.

The following are the leading awards of premiums for agricultural products at the first fair of the Southern California Horticultural Society in their new pavilion in Los Angeles:

Farm Machinery.

B. W. Bower—Cider mill and press; E. K. Green, one-horse cultivator; Holly & Jones, two-horse cultivator; I. A. Dunsmore, churn; T. Ronsn, gopher trap; L. Lichtenberger, two-horse family carriage; S. W. Luitweiler, 2d best two-horse family carriage; Page & Gravel, one-horse family carriage; Rees & Wirsching, 2d best one-horse family carriage; Louis Roeder, open buggy; McGarvin & White, 2d best open buggy; Louis Roeder, wagon for general purposes; Rees & Wirsching, 2d best wagon for general purposes.

Field Crops.

J. L. Lanterman—Wheat, rye, oats; J. F. Nadeau, barley, yellow corn, dry field peas; A. J. Cooper, white corn; David Lewis, peas; H. H. Roper, red potatoes; S. A. Waldron, potatoes, watermelons, cucumbers; Albert Glass, sweet potatoes; C. N. Wilson, parsnips; G. A. Blakeslee, carrots, Hubbard squashes; M. Serrott, sugar beets, dry garden peas; G. A. Armstrong, crookneck squashes; Judge R. Kauney, pumpkins; E. M. Hamilton, mountain sweet watermelons; O. N. Cadwell, kidney beans; G. H. Peck, castor beans.

Fruit.

J. Torrey—Best display of apples; O. N. Cadwell, 2d best display of apples; Rev. S. Bristol, 12 varieties apples; B. W. Mower, 2d prem; O. N. Cadwell, 6 varieties apples; M. D. Halliday, 3 varieties apples; O. N. Cadwell, display of pears; J. D. Durfee, 2d prem; O. N. Cadwell, 6 varieties pears; O. N. Cadwell, 3 varieties pears; P. M. Green, peaches; A. J. Cooper, 2d prem; O. H. Congar, 6 varieties peaches; Ivar A. Weid, green figs; T. A. Garey, lemons; O. R. Workman, 2d prem; T. A. Garey, 50 specimens budded lemons; D. C. Twogood, Mexican limes, 2d prem; Jose Rubio, variety table grapes and 12 varieties white grapes; James Boyd, table grapes, 2d prem. California raisins—The Committee being unable to decide, premiums of \$15 each were awarded to G. D. Carlton and E. G. Brown; C. E. Packard, 3d prem.

Trees and Plants.

Co-operative Nursery and Fruit Company—Best exhibit of trees; Fisher, Richardson & Co., 2d prem; A. J. Cooper, seedling orange, lemon and lime trees; Co-operative Nursery and Fruit Company, 2d prem; Fisher, Richardson & Co., budded orange and lemon trees; Co-operative Nur-

ery and Fruit Company, 2d prem; A. J. Cooper, sample budded orange tree; Fisher, Richardson & Co., 2d prem; Co-operative Nursery and Fruit Company, sample budded lemon tree; A. J. Cooper, 2d prem; Fisher, Richardson & Co., exhibit deciduous fruit trees; Woodhead & Gay, collection ornamental foliage plants.

Wine.

F. Hartung—Dry white wine, vintage of 1875; J. de Barth Shorb, 2d prem; J. de Barth Shorb, California Angelica wine; Wm. Koenig, 2d prem.

Nuts and Dried Fruits.

Wm. Butts—Dried pears, plums, and nectarines; James Boyd, peaches; O. N. Cadwell, Eng. sh. walnuts; J. D. Durfee, 2d prem; A. J. Davidson, soft-shell almonds.

Honey and Preserves.

R. G. Balcom—Honey; C. N. Wilson, 2d prem; Woodhead & Gay, display of fruit in glass; Miss Julia Harrold, raspberry, red currant, blackberry and strawberry jellies, and blackberry jam; Mrs. Dr. Wise, quince jelly; Mrs. Niemeyer, display of preserves in glass.

Dairy and Domestic.

Webster, Howe & Co.—Cheese; J. D. Durfee, butter; Sarah Haines, biscuit; Mrs. E. K. Green, corn bread, brown bread, wheat bread, rye bread, domestic bread; Miss Emma J. Bradley, biscuit made from Bowen Bros. yeast powder.

Miscellaneous.

T. A. Garey—Citrons, Italian chestnuts; G. Sebastian, tomato preserves, grape jelly; J. L. Lanterman, comb foundations; G. A. Blakeslee, pop corn; F. G. Hanna & Co., Wheeler mower and sulky rake; G. H. Peck, flax seed; Wm. Butts, Petaluma fruit drier; G. H. Peck, Harris fruit drier, 2d prem; Asbestos Stone Company, system of irrigation; A. F. Mills, 9 ears yellow corn; A. J. Cooper, deciduous ornamental shade trees; S. Washburn, white and yellow corn; B. W. Mower, rape seed; C. Willis, honey barrels; James Boyd, method of drying fruit; Frank Bros. & Co., sulky plow, gang plow, hand plow; C. N. Wilson, Egyptian corn; Wm. Butts, canning apparatus; N. Gray, orange brandy and California oil of lemon; J. de Barth Shorb, olive oil.

Revival of the Desert Land Law.

General Williamson, Commissioner of the General Land Office at Washington, awakes the desert land law from its long suspension by deciding that the lands in Kern county, about which there has been so much controversy, are properly "desert lands" in the meaning of the law of March, 1877. This decision therefore gives Mr. J. B. Haggin, and those associated with him, the right to these lands on the taking up of which there was complaint which led to suspension of the law and long investigations. The Commissioner's decision and the reports of the evidence presented at the investigation in the Visalia division are said to fill three printed volumes. His conclusions, as reported by telegraph are, as follows: With statistics of rainfall and the well-known fact that the climate is hot, and that the earlier settlers, with a choice of selections, have for years been compelled, at great expense, to resort to artificial irrigation so as almost to exhaust the ordinary supply of water, the department is prepared to believe that the few parcels left will certainly refuse an agricultural crop without the aid of water artificially brought to them, and that they are included, even in the general description of Kern island, where a precarious growth of wild grasses is found during some seasons, and which, in his judgment, are not at best of sufficient value to be called an agricultural crop within the meaning of the statute. The desert entries in these five townships are made by 21 different persons, and comprise only 2,443 acres, in a total of over 115,000. One witness testified that the best and most easily watered lands were taken by the Eastern settlers, and these desert entries are doubtless parcels least desirable for any purpose, and most difficult to irrigate.

The Commissioner also finds that the low cottonwood and willow clumps which fringe the sloughs are not of such character or amount that any of the tracts entered can be designated as timber lands, the evidence demonstrating that all tracts entered are agricultural in character, though nearly worthless without irrigation. Commissioner Williamson proceeds: "The testimony shows that no one man has nominally claimed to enter more than he is entitled to under the law, but that many have entered adjoining tracts and are jointly irrigating the entire body of land entered. There is no evidence which proves that this is not in good faith and for the real benefit of all. It seems that long canals are necessary, and many persons desiring to enter land are unable to build a ditch, and could not afford to do so, except in common with others. This seems to have been the practice with prior settlers. It seems reasonable and even necessary, if one man is to have one section or less. And I think there is nothing in the statute or intention of its makers to prohibit combined enterprises to make a large district of desert land valuable." General Williamson notes that some of these entries are in townships where good land, easy of irrigation, had previously been cultivated, and suggests that the original reports which led to this investigation were based upon hasty and mistaken suppositions that all the lands were alike in location and character. His conclusion, after a careful examination of the whole matter, is that the entries in question ought not to be cancelled, and he therefore unqualifiedly recommends a removal of their suspension.

Transactions in Public Lands.

A dispatch from Washington announces that J. A. Williamson, Commissioner of the General Land Office, has completed his annual report to the Secretary of the Interior. It shows that during the fiscal year ending June 30th, 8,686,178 acres of land were disposed of, and 8,041,011 acres were surveyed, in addition to 721,618,748 acres previously surveyed. The total number of acres of public domain still unsurveyed is something over one thousand million acres. The disposals were mainly as follows: Homestead entries, 4,418,344 acres; timber culture entries, 1,870,434; desert land entries, 3,105,553; cash entries, 877,555; grants to railroads, 606,340; swamp lands patented, 202,926; other grants to States, 214,992. These figures show a great increase in quantity of land taken up by the class of actual settlers as homesteads and for the purpose of timber culture. Cash receipts amount to \$2,022,536, being \$569,567 more than the receipts for the preceding year. Commissioner Williamson recommends in regard to lapsed railroad grants, that Congress should either declare the grants forfeited and restore the lands to disposal as part of the public domain, or extend the time for the completion of the road. Among other recommendations contained in the report are the following: For legislation to transfer any title the United States may possess in islands and beds of "meandered" lands, sloughs and ponds, to the States in which they respectively lie; to allow affidavits in preemption cases to be taken before Judges and clerks of Courts of record anywhere in local districts, instead of compelling attendance before Registers and Receivers; to repeal the town site law, except as regards applications made under the law previous to its recent amendments; to enable the department to extend prompt relief to parties entering public land where a title cannot be confirmed, and also in cases where erroneous and illegal exactions have been made, by refunding to them the money paid in error. The report exhibits in detail the work done in connection with the suppression of timber depredators on public lands, and presents a variety of information with regard to abandoned military and Indian reservations, the adjustment of private land claims and miscellaneous matters. In conclusion, the Commissioner refers to and earnestly reiterates former representations made by him regarding the need of an increase of the number of clerks and of the amounts of appropriations for the dispatch of the constantly-accumulating business of the land bureau.

An English Tribute to American Inventors.

The great English "opinion maker," the London Times, in its review of our exhibits at the Paris exposition, pays the following tribute to American inventive genius: The activity and insight of the American inventive genius develops more than is new and practical in mechanism than all Europe combined. The New Englander invents normally; his brain has a bias that way. He mechanizes as an old Greek sculptured, as the Venetian painted, or the modern Italian sang. A school has grown up whose dominant quality, curiously intense, wide spread and daring, is mechanical imagination. It is not the professed mechanic or ironmaster who invents, as most more than the schoolmaster or the farmer. As the intoretto left his dyeing to become a great painter, the American, be he bank clerk, pedagogue, hackwoodsman or plowman, turns in his busy brain some problem of his own, suggested by his experience of ill or too slowly done work, and like Archimedes in his bath, he suddenly finds it and rushes away with his "Eureka" to some place where he can make his model or get it made—more frequently the former for want of funds to get it made. There was a want the man had felt, an ideal he worked out, and in his meditation sudden y the thing flashed on him, and is complete in all its essential parts from that moment.

WINDMILLS.—Horton & Kennedy, of Livermore, Alameda county, still keep their famous Enterprise windmill before the public, and so far as we have heard and seen it is a windmill which well deserves its prominence. We hear of it in all parts of the State as doing good work, and on the place where we have lived for the past year, we have often noticed the Enterprise in motion while others in sight were waiting for a breeze. The view from our place undoubtedly does not embrace all the good mills that are made, but it shows that the Enterprise goes about its business well, without loafing around as some others do at least.

PACIFIC COAST POSTAL CHANGES.—Office established—Rye Valley, Baker county, Oregon, William Blaine, Postmaster; Key, Thurston county, Washington Territory, William Shuman, Postmaster; Brown's Park, Summit county, Utah, John Parsons, Postmaster. Offices discontinued—Low Gap, Mendocino county, Cal.; Providence Wells, Pima county, Arizona. Postmasters appointed—Sylvanus Gardner, Erie, San Benito county; J. C. Morrison, Lindale, Modoc county; W. E. Fifield, Madison, Yolo county; M. L. Landrum, Peach Tree, Monterey county; J. B. Dattel, Sherman, Santa Clara county, Cal.; Gaines M. Adams, Hood River, Wasco county, Oregon; Chas. A. Connelly, Leeds, Washington county, Utah.

News in Brief.

EDISON has been seriously ill.
NEVADA wool is coming into Winnemucca.
TURKISH paper money is at a most alarming discount.
A PRUSSIAN 4% loan of 60,000,000 marks has been negotiated.
SHEEP herders in Montana refuse \$2.50 a head for their stock.
SPAIN seem to be anticipating a general European war.
The insurgent Bulgarians aim to exterminate the Turks.
AN attempt has been made to assassinate the King of Spain.
BAYARD TAYLOR has submitted to a dangerous surgical operation.
THE volcano of Momotombo, Nicaragua, has shown signs of activity.
THE Oregon Agricultural Society will lose about \$12,000 by the State fair.
NAPA valley, it is estimated, will produce 1,721,000 gallons of wine this season.
THE corn yield this year of 51 counties in Ohio is estimated at 63,865,000 bushels.
ON the 30th of November an industrial exhibition will be opened in Guatemala.
THERE are prospects of an immense crop of oranges at Old San Bernardino this season.
ONE hundred and fifty Cheyennes with 140 horses and mules were captured Oct. 22d.
THE official estimate required for the Postal Service the next fiscal year aggregates \$36,551,900.
ON the anniversary of the death of Harry Meiggs, a solemn requiem mass was sung in Lima.
A FIRE at Fort Whipple, near Prescott, Arizona, will cost the Government from \$8,000 to \$10,000.
THE insurrection against the Turks is spreading in Bulgaria. The Eastern problem is not solved yet.
It is stated that 17½% more skilled workmen were employed at New York in October, than during the same month last year.
DENMARK has for many years supplied canned butter to South America. The same industry is to be commenced in this country.
THE new freight regulations of the Union and Central Pacific railroads, will gain from four to 11 days for California importers.
FRENCH Cabinet Councils are discussing the gravity of the situation between England and Afghanistan, and the state of affairs in Turkey.
THIRTY-SEVEN prisoners now confined in the State Prison at San Quentin will be liberated during November, 24 being restored citizenship.
JACKSON county, Oregon, wool growers, during the week ending Oct. 19th, sold about 50,000 pounds of wool at Roseburg for 10 cents per pound.
THE iron masters of the North of England have decided to reduce wages 5% on the 30th of November. Operatives strenuously resist the reduction.
THE rubber business of Nicaragua has greatly diminished, partly on account of the restrictions and imposts made by the Costa Rican government.
A DESTRUCTIVE prairie fire has traversed from 15 to 20 counties in Dakota, between Jim river and the Missouri river. The destruction of property is large.
THE Chinese Minister sees no reason why the use of pure tea, which is cheaper than that artificially colored, should not be used by us more extensively.
EDWIN FORREST, Mono county, died from the effects of the amputation of his leg, made necessary by the explosion of a box of giant powder caps in his pocket.
SHIPPING pampas plumes is a new industry of Santa Barbara. One man has sold 40,000 this season to San Francisco and the East, netting him \$4,000.
ON the morning of Oct. 23d, a frightful hurricane swept along the region between the Atlantic and Alleghanies, damaging property to the amount of millions.
ON Oct. 27th, masked men robbed the Manhattan Savings Bank of New York, after extorting the keys and the combination by threats from the janitor.
THE Secretary of the Interior affirms the Land office decision in the case of Elisha Wright versus Burrell Armstrong, involving title to land in Stockton district.
LOUIS MAYER, of Vancouver, has a contract with parties in Europe to ship fir cones. The seeds are to be extracted at the destination and planted in congenial places.
THE conductor who is charged with having caused the New England railroad accident, has been adjudged guilty of manslaughter, and is held in \$10,000 bail for trial in December.
It is hinted that Secretary Sherman will recommend a limitation of the coinage of silver dollars, or increase the amount of silver in them so that they will be equal in value to gold.
It is suggested that the condition of the British markets renders possible a sharp demand upon us for gold, to be obtained by returning American securities other than United States bonds.
It is stated that the Union and Central Pacific railroads have completed arrangements with all the Eastern lines by which California freights will be loaded separate in full car loads, and cars run through with but one transfer.
THE grain crop of lower Puget sound will be much larger this year than for any previous season. The yield has been much less per acre than last year, but the acreage much larger.



Ten Years Ago To-day.

Poem for a Tin Wedding.

Ten years ago to-day, my wife,
Our hands were joined in one,
And we began the blessed life,
So long our dream, of man and wife,
In trust that God, through storm and strife,
Would bless till life were done.

Ten years ago to-day, my dear,
We heard the parson speak;
And, like a voice of higher sphere,
Soft falling on the listening ear,
It made new world of now and here;
"It shall be as ye seek."

Ten years ago to-day, my love,
"For better or for worse,"
Each said "I will," assured by love,
Whose breath was soft as brooding dove,
That nothing here, beneath, above,
Should turn our love to curse.

Ten years ago to-day, my queen,
Our loving hearts were crowned;
While slanting sun, from skies serene,
Upon us poured celestial sheen,
And light was felt by eye unseen—
The joy we sought was found.

Full many are the changes brought
By years a half a score;
And some were feared, and some were sought,
And life has not been as we thought;
But only this in heart is wrought—
I love thee more and more.

Of home the life, of life the light,
Thy presence now, as erst,
Still thrills us with a fine delight,
Reminding of the vision bright
When thou didst walk the green in white,
The hour I saw thee first.

About our hearth sweet children play;
They kneel with us in prayer;
And, as we watch them day by day,
Hear all the cunning things they say,
And see them mount in wisdom's way,
They recompense our care.

And here again we take our stand,
Renewing trust as yore;
And we will walk as love has planned,
Exulting each in other's hand,
Till feet have touched the outer strand
And pressed the golden shore.

—James Barnes.

At Eventide.

A New Poem by John G. Whittier.

Poor and inadequate the shadow-play
Of gain and loss, of waking and of dream,
Against life's solemn background needs must seem
At this late hour. Yet not unthankfully,
I call to mind the fountains by the way,
The breath of flowers, the bird-song on the spray,
Dear friends, sweet human loves, the joy of giving
And of receiving, the great boon of living
In grand, historic years when liberty
Had need of word and work, quick sympathies
For such as fall and suffer, song's relief,
Nature's uncloying loveliness; and chief
The kind, restraining hand of Providence,
The inward witness, the assuring sense
Of an eternal Good that overrules
The sorrows of the world, love which outlives
All sin and wrong, compassion which forgives
To the uttermost, and justice, whose clear eyes
Through lapse and failure look to the intent,
And judge our frailty by the life we meant.

—Youth's Companion.

Glimpses by the Wayside in Yolo and Colusa Counties.

[Written for the RURAL PRESS by Mrs. M. STAFFORD.]

A journey through the agricultural counties of California in the month of September is by no means one of pleasure altogether, especially by private conveyance. As well as many other things it has its unpleasant side, and that side generally is pretty thoroughly covered with heat and dust. It was so in this particular instance, however, as our contemplated journey was one of business rather than pleasure, we with a brave heart, in the latter part of September, left our cosy little home in the valley of Berryessa, for a land journey through Yolo and Colusa counties. The long, warm day was just drawing to a close as we neared the pretty town of Winters, at the mouth of Putah canyon, and the supper bells, a welcome music to the tired and hungry traveler, were just sending forth their merry peals. Here we met and grasped hands with old and well-remembered friends, who hospitably provided us with supper and kindly invited us to spend the night, but a long journey of 60 miles for the next day was before us, and it was deemed advisable to take advantage of the moonlit night and proceed northwest as far as Madison, the terminus of the Yaca Valley railroad.

Moonlight on the Plains.

An ardent and appreciative lover of nature can see "books in running brooks, sermons in stones and good in everything," in short, can see beauty almost everywhere. Under the broad canopy of the stars, with the cool night wind greeting us, we journeyed. All over the plain, the full moon beamed, radiating and

transfiguring everything with its splendor, until in the far distance its brightness was lost in the dim haze of the horizon. The lonesome call of the night bird floated to our ears on the soft wind, and here and there a sweet perfume from some wild herb by the wayside, greeted the senses, as sweet as a breath from Araby; but notwithstanding the quiet harmony and moonlit splendor of the night, tired nature began to long for rest, and by 10 o'clock we were not loth to leave the poetry and beauty and sentiment of the night for the more substantial comforts afforded at the Madison hotel. Here a good night's rest and breakfast invigorated us and the early morning sun saw us on our journey.

As it is late in the season, most of the work is done; the grain is mostly hauled to market, and as a consequence the roads, so long dry, are fearfully cut up, and the dust beggars description. Occasionally we met a loaded wagon bringing in the last of the harvest, and farmers are now stacking straw, building and repairing barns and fences, and otherwise getting ready for the winter's rain. Some are already sowing and harrowing. A pleasant feature of this part of the Yolo plains is the

Large Number of Well-Improved Farms, Known and seen as far as the eye can reach by their fine orchards and vineyards, and ornamental trees, which appear among the vast brown fields, as oases in a desert. Here are well-settled homes, and an occasional school-house; but as we proceed towards and beyond that belt of undulating hills, known as the Hungry Hollow hills, the farms assume, for the most part, a different aspect. The whole country seems to be owned by a few individuals, who grow fat off the rent of their broad acres. There are no homes here, only occasionally a miserable shanty, an old, tumble-down barn—but often the barn is much better than the house; no orchard, and nothing home-like and cheerful. School-houses are very few and far between; churches there are none; and we recognize the fact that we are in a country that is cursed by the blight of land monopoly. Instead of these broad, desolate fields, there might be pretty homes and small but comfortable farms, with school-houses and churches to give it an appearance of civilization; and while I deplored the existing state of things, I found myself drifting into a subject that could be expatiated on, and even agitated like the Chinese question, if indeed agitation would result in any good.

Under the Pines.

High noon was advancing as we entered the beautiful belt of woodland that runs from the range of mountains out toward the Sacramento river. It was a grateful change, from the hot and dusty road of the plain and hills, and we took occasion to camp under the trees and spread our noon lunch near by a large pine tree, that wooed me by its loving music to rest under its generous shade. In times long past how often have I been lulled to sleep by the murmur of the pine, as it sang its "slow perpetual song," and its sweet music came to me now like the lost melodies of other years! How many tender memories of another life, of faces long since faded by the lapse of time, and hopes sunken in the sea of years, and dreams that only mocked us as they led us on, came to me as the ceaseless wind brought to my ears the old familiar sound.

Williams.

But the hour of noon was soon gone, and with it we left the refreshing coolness of the woods. The sun was well nigh down the horizon, just dipping behind the dark mountains that all the way had flanked us on our left, when we reached the residence of Mr. R. C. Gillaapy, some ten miles from Williams. Here we were greeted with that cordial friendship so characteristic of the California pioneer, and during our stay of a few days with his pleasant family enjoyed the comforts of their hospitable home. But time speeds; and though this lingering in the company of friends—this *dolce far niente* existence—is pleasant, yet we are aware that we are the creatures of circumstance rather than of will, and borne onward by the resistless current of events we soon find ourselves again on our journey. As we pass the new but rapidly improving town of Williams, Colusa county, we note with pleasure the numerous new buildings that have been erected there during the past year. Judging from the location, it will always be a central point for the shipment of grain, etc. It is now no longer the terminus for the railroad, for already the shining track has left them far in the distance. Farther on we saw large bands of Chinamen employed in grading the track, carpenters at work on the bridges, and long gravel trains moving across the plain. The track at the time of which I write was nearly completed to Willows, and the 27th of September witnessed the arrival of the first train of cars at that place.

The Town of Willows

Deserves more than a passing notice. It has been built chiefly during the last two seasons. It has an air of freshness, thrift and industry, and about it is the odor of new paint and new lumber, and altogether impresses the traveler pleasantly. The houses are not all of that temporary character so noticeable in most railroad towns, but, some good buildings have been built, among which is one mammoth brick warehouse, not yet completed, but being filled with grain; there are two or three neat and pretty churches, which speak volumes for the morality of the place, and a school-house which, for size and beauty, would do credit to a place of such greater importance. The country

in that vicinity was low and level, and during the long rain storms of the past winter, the roads were nearly impassable, this made freighting and traveling a serious matter; but now, since the completion of the railroad, this difficulty is removed, and Willows, being the present terminus of the road, is destined to become a place of considerable importance, and the nucleus of trade for that part of Colusa county. The track is smoothly and substantially built, and it will be comforting to travelers passing through there during the rainy season, to know that it is built above high water-mark. Fourteen miles farther, and we were at the end of our journey, where we were warmly welcomed by loving friends, and one day later found us homeward bound. A dense smoky atmosphere enveloped the plain like a pall, and we regretted that we were unable to catch a glimpse of the beautiful Sierra Nevada beyond the bold buttes of Marysville, and the fringe of the trees that borders the Sacramento river. There were old memories that like a magnet drew my faithful heart thither, and I would gladly have rested my gaze on their far faint blue outlines.

But I have already made this article much longer than I intended.
Monticello, Oct. 1st.

New Italy.

EDITORS PRESS:—New Italy is here yet; so is your Nietos correspondent. Having nothing of interest to write, and when I do deign to write, my seeing things so very differently from my friends of the quill, is a source of little trouble to me. I never could write with gloves on, nor view flower gardens only. I like to deal with facts, such as the rearing of eight or ten boys and girls, who eat up during the year quite a pen full of fat hogs and such like; stamp out during the year 40 or 50 pairs of boots and shoes, and calico and jeans, accordingly. Now, the beautiful theories that will stand this test and pay these bills as we go is why we stand by the RURAL PRESS. Humbugging theories, fanciful pictures of what we are just about to achieve, and grammatical flattering letters may please, but they do not pay for boots and shoes, nor pay our bills with the grocery store.

On an average we of New Italy have no reason to complain. Some of our neighbors grew migratory last year and two went to Oregon, some three or four families to Arkansas, some to Texas and one or two to "bay counties." Their letters indicate hard times elsewhere, and that they rather regret the change. I find no more than the average faults in this country. The first year here frost nipped my barley; second year barley only worth \$8 and \$10 per ton; third year, drouth; fourth year, excessive wet and no price for what little barley I did raise. Well, what of it? Why should I become migratory? That would only make the matter worse. Thousands of farmers in our broad land of America have done worse, and I might have done better only that I invariably had three times the land in hand at once than I ought to have had.

The weather is oppressively warm. Immigration is rather sparse. Corn and hogs are very plentiful, and prices very low. Barley is ruling very low, mainly by reason of being of a husky, dark quality, unfit for brewing. Very little trade of any kind moving.

GEORGE K. MILLER.

Los Nietos, Cal., October 25th.

On Whisky.

EDITORS PRESS:—Please tell your well meaning though mistaken correspondent, the gentleman of Mt. Pleasant, Tuolumne Co., that we do not wish to veto whisky to the dogs, and for these reasons: First, they would not long retain possession. Second, we do not wish to destroy or injure our dogs. Third, the animals are faithful and honest and have not merited such treatment. Fourth, it is desirable with thousands that the curse be farther removed.

May Almighty God grant that this generation see the day when ardent spirits, the greatest, the vilest, the most malicious curse of earth, be banished from our State.

L. V. CUSHMAN.

Newville, Colusa Co., Cal.

CHINESE PENALTY FOR ADULTERATING TEA.—The practice of adulterating tea with willow leaves has been brought under the notice of the Governor of Foochow by the Chamber of Commerce of that place. As the result an official proclamation has been issued threatening the delinquents with severe punishment. Those at the head of the scheme, it recites, are numerous, and any person who proves the guilt of one of them will receive 100 piasters. "Let all," it adds, "tremble and obey."

TRADE POSITION OF THE UNITED STATES.—As a remarkable feature in the world's commerce at the present time, it may be noted that the United States is the only country where its exports exceed its imports with the exception of India, which has a small trade balance in its favor. The increase in the importations of Europe is principally in breadstuffs, the United States being the great source of supply for European deficiencies in that line.

Sanitary Funerals.

In an article on this subject in the New York Independent, the writer remarks as follows: First of all, every person that dies should have a thorough washing of the whole body. To two quarts of warm water it is best to add one pint of the chlorinated soda of the shops known as Labarogue's solution. A half pound of chloride of lime stirred into the same quantity of water and allowed to settle, and the water poured or strained off, will do as well. A large wad of cotton or a small bag of sawdust mingled with a pound of chloride of lime is well placed under the hips after washing.

The whole process by which the Jews prepared a body for burial may well be imitated in our modern times. The washing was followed by the application of spices to the corpse in the form of ointment or within the folds of linen. Our recent chemical analysis shows these spices as not mere odors, but as disinfectants, in their essential oils having the very same combinations that we use less pleasantly. The bandaging of the body closely and neatly in these spices up to the head, which was covered separately, served to encase the remains, so that coffins were rarely used, and, if used, were open. The changes which take place in a dead body within three or four days after death are such as diminish any danger from the body itself, and need to be counteracted only as would any other moderate contamination of air.

It is to be remembered, too, that the contagions which attend upon certain diseases are not so apt to be transmitted by a dead body as by the clothes upon it or around it, or by the room which has become infected during the life. If, for instance, a child deceased of scarlet fever has undergone proper disinfecting ablution and bandaging for burial, and is conveyed to a church or other building, we do not believe any case of disease contracted therefrom can be authenticated. We are sorry to have to criticize the action of some health boards in insisting upon private funerals in so many diseases. To lose dear ones and to have city boards advise all people to avoid you but increases the sorrow of the loss. It is a time for sympathy, which cannot be expressed by distance. If it can be shown that there is danger, then surely we bow to the exigency. But if not, we insist, harm is done by too sweeping ordinances. Let us rather mark well the lines of safety. With sanitation of the body within reach and indicated by the laws of a right cleanliness, let it be known that the danger is not in the body that is dead, but in unaired or non-disinfected rooms, garments and surroundings. More good comes to society by such facts than by dictating attendance. In contagious diseases children may not be exposed to the room, but there is no danger in the properly preserved body.

Closets.

We have lately built a house, and have been duly impressed, by frequent injunctions from our spouse, with the importance of "plenty of closets." Let any of our housewives should need "points" to corner their lords with on this great domestic need, we give them the following from the *Inter-Ocean*: Next in importance to stairs are closets. People have stood by the early graves of many overburdened wives and mothers, and murmured at the strange dispensation of Providence, etc., when the real cause was the need of more closets. You think this is fun. Did you ever visit your great aunt who lives in one of the "old homes," sacred to the memory of the "first families," and have a "neighbor's little girl" come over to borrow the wrapper pattern, and did you ever listen attentively while you were instructed to "take the key of Mildred's room, and lift down the leather-covered trunk, and take out a box from the hair-covered one, and in the box you would find the pattern, tied up with a piece of blue and white gingham?" If so, after bruising your hands in unlocking the ill-fitted door, tearing your dress on a brass nail in the leather-covered trunk, and dropping the hair-covered trunk on your foot, and then rising in impatient exclamation, and praying to be forgiven, you will understand how much more convenient it would have been if your "great aunt" had had an accessible closet in her own room, especially when you discover that the pattern was not there, but was in the other trunk which was calmly resting underneath enough blankets, quilts, etc., to set up house-keeping with. Some houses are so bare of closets that upon entering the front hall you start back, thinking you have made a mistake, and entered the "clothes press." We find a model description in "Norwood," from which we quote: "One balls, so-called, a man sees a pair of corkerew stairs coming right down upon him and fears lest, by some jugglery, he be seized and extracted like a cork into some upper space. Often the doors are so arranged that, what with the shutting of the outside door and the opening of inside ones, the timid stranger stands a chance of being impaled on the latch."

"Well, John," said a minister to one of his hearers, "I hope you hold family worship regularly?" "Aye, sir," answered John, "in the time o' year o't." "In the time o' year o't! What do you mean?" "Ye ken, sir, we canna see in winter." "But, John, you should buy caudles." "Aye, sir, replied John, "but in that case, I'm afraid the cost might overgang the profit."

Chaff.

DUSTY pedestrian: "I should like a glass of beer, missis, please—" Landlady: "Hae ye been travelin' by rail?" Pedestrian: "No, I've been walking—14 miles." Landlady: "Na, na, na, drink will only yin get here, wha's been pleasure-seekin' o' the Sabbath day!"—*Punch*.

"Is there anything that will make grain come up quick?" asked a rich amateur farmer of an old husbandman. "Well, no, I don't know of nothin' that will do it," was the genial old fellow's reply, "unless it be rooks." Then the amateur farmer wanted to know where he could get some.

"THAT," said a citizen of Keokuk to a friend, showing his thumb, "that reminds me of wart times." "Ha!" replied his friend, "I tumbled, wart will you take?" "A little water, weakened with whisky," was the reply given, as the two held a black walnut counter down with their two elbows.—*Keokuk Constitution*.

GUEST: "Waiter! this salmon isn't as good as that we had the day before yesterday." Waiter: "Oh, yes, it is, sir. You're quite wrong. It's the same one." Second restaurant scene.—Guest: Waiter, this quail is fearfully high." Waiter (pointing across the table): "Oh, no, sir! It's that gentleman's salmon."—*Paris Figaro*.

SOME one has suggested that if the inventor of the phonograph would bring out a little machine to be attached to the front door, which would say, when the landlord called for the rent, "Come again next month," it would have a good sale. So it would; and if he wanted a name for it he might call it the Post-phonograph.

ONE of the School Board, going his rounds as an amateur, put the following question to a scholar in a country school: "How do you parse 'Mary milked the cow?'" The last word was disposed of as follows: "Cow is a noun, feminine gender, singular number, third person, and stands for Mary." "Stands for Mary!" exclaimed he of the Board, "how do you make that out?" "Because," added the intelligent pupil, "if the cow didn't stand for Mary, how could Mary milk her?"

A MAN having buried his wife, waited upon the gravedigger, who had performed the necessary duties, to pay him his fees. Being of a niggardly disposition, he endeavored to get the knight of the spade to abate his charges. The patience of the latter becoming exhausted, he grasped his shovel impulsively, and with an angry look, exclaimed: "Doon wi' another shilling or—up she comes!" The threat had the desired effect.

It was a Froshman, and it happened about dusk Thursday evening. We found him wandering disconsolately through the dust and ashes of Bedbug alley. Upon being questioned as to the cause of his discomfiture, he exclaimed: "Darn it, I don't get the knack of them lamps there, (pointing to the gas fixtures)—they don't have the gol-darned things out our way. Why," continued he, "perhaps you wouldn't believe it, but I've been trying to turn up that wick for these two hours, and I can't raise her."

THE HAIR.—The quality and color of the hair was a subject of speculative theory for the ancients. Lank hair was considered indicative of pusillanimity and cowardice; yet the head of Napoleon was guiltless of a curl! Frizzly hair was thought an indication of coarseness and clumsiness. The hair most in esteem was that terminating in ringlets. Dares, the historian, states that Achilles and Ajax Telamon had curling locks; such also was the hair of Timon, the Athenian. As to the Emperor Augustus, nature had favored him with such redundant locks, that no hair-dresser in Rome could produce the like. Auburn or light brown hair was thought the most distinguished, as portending intelligence, industry, a peaceful disposition, as well as great susceptibility to the tender passion. Castor and Pollux had brown hair; so also had Menelaus. Black hair does not appear to have been esteemed by the Romans; but red was an object of aversion. Ages before the times of Judas, red hair was thought a mark of reprobation, both in the case of Typhon, who deprived his brother of the sceptre of Egypt, and Nebuchadnezzar who acquired it in expiation of his atrocities. Even the donkey tribe suffered from this ill-omened visitation, according to the proverb of "wicked as a red ass." Asses of that color were held in such detestation among the Copts, that every year they sacrificed one by hurling it from a high wall.—*Edinburgh Standard*.

GLOVES—ORIGIN OF "PIN-MONEY."—Gloves are very common as New Year's gifts. For many hundreds of years after their introduction into England, in the 10th century, they were worn only by the most opulent classes of society, and hence constituted a valuable present. They are often named in old records. Exchange of gloves was at one period a mode of investiture into possession of property, as amongst the ancient Jews was that of a shoe or sandal, and "glove money" is to this day presented by high sheriffs to the officers of their courts, upon occasion of a maiden assize or one in which no cause is tried. Pins, which at the commencement of the 16th century displaced the wooden skewers previously in use, became a present of similar consequence; and, at their first introduction, were considered of so much importance in female dress, that "pin-money" grew into the denomination of dower, which, by the caution of parents or justice of a consort, was settled upon a lady at her marriage.—*London Society*.

Young Folks' Column.

Weighing the Baby.

Call up grandpa from his book!
Bid papa be present!
Draw the lace-hung cradle out
In the sunshine pleasant.

Since the little stranger came
"Tis a month this Monday—
To each and every one
Of all days the one day.

None can show a finer boy,
Whosoever they be;
But, to set all doubts at rest,
We will weigh the baby.

Grandpa's eyes beneath his specs
Show a merry twinkle;
Grandma's smiles are lighting up
Every dear old wrinkle;

Mamma lays the baby down;
Everything is ready—
Papa holds the blanket up
In his fingers steady.

See the darling's laughing eyes!
Wisely wandering, maybe,
Why we make so great a fuss
When we weigh the baby.

Kiss him twenty times around;
Tuck in all the flounces;
Do not make the least mistake
In the pounds and ounces.

Slide the weight along the line—
Papa's swift subtraction,
Unerring grandpa's estimate,
Gets it to a fraction.

Just twelve pounds! You precious pet!
Not a baby going,
In a few short weeks, has done
Such a sight of growing.

Grandpa's chuckle of delight
Vain he tries to smother;
Papa's eyes rest proudly on
Baby's pretty mother.

Shines a tear-drop in her eye,
Gazing on her treasure?
Thinks she of the love untold
God alone can measure?

Years of manhood, years of toil,
Grief or sin, we may be
Weighing with unconscious hand
When we weigh the baby.

Nay, let smiles replace the tear!
'Tis a mother's duty
Just to smile, and smile, upon
Such a bunch of beauty.

Close and closer to her heart
Her wee darling pressing,
Mother-lips above the child
Breathe this fervent blessing:

Whether life be long or short,
Bright or dark the way be,
Heaven protect the darling boy!
Angels guard the baby!

—*Harriet E. Benedict in Wide Awake.*

Mice Melodies.

Who ever heard a mouse sing? We have heard their little voices when the room was still and they had no idea that we were nigh, but we had little thought that their notes could be called melodies. They must sing, however, for a writer in the *Popular Science Monthly*, who would not dare to tell anything but the truth in that sedate magazine for sedate people, gives an account which even our little folks will enjoy. He tells of some mice singers which he saw, as follows: "The song to which the little creature gave utterance again and again in our full view was as sweet and varied as the warbling of any bird. It most resembled that of the canary, but the melody of the nightingale was occasionally introduced. Every note was clear and distinct, but withal so soft, so gentle, tender, and *pianissimo*, that I can only compare it to the voice of a bird muffled by being heard through a down pillow. In the room was a canary, whose cage was suspended in one of the windows. He had settled himself to roost, and his head was under his wing, but at the sound of 'Nicodemus's' serenade he awoke and listened attentively, and fantastically leaning alternately to right and left, peeped curiously down to the floor. I learned that mouse and bird were intimately acquainted with each other, and that the former frequently visited his feathered friend and stayed to supper. Accordingly, while we looked on with interest and pleasure, 'Nicodemus' climbed up the drawn curtains, entered the bird's cage, and partook of the seed—the canary showing no symptom of disapprobation or disturbance, but merely from his perch peering down on his visitor in a ludicrously quaint and odd manner. During his supper-time 'Nicodemus' obliged us, from the cage, with several repetitions of his song, 'The Chirper,' down below on the carpet, occasionally coming in with a monotonous contralto accompaniment, and sometimes emitting a sound like the squeaking of a corkscrew through a cork. The two little songsters having done their best to please us, were rewarded with all that mice could wish for as components of a feast, and, after selecting the portions they severally preferred, gracefully retired."

WHAT A LITTLE GIRL WANTED.—The following is floating about in the newspapers: A little girl, aged 11, residing in Iowa, wrote a letter recently to "Dear Uncle Sam," at Washington, stating that her father and eldest brother were about to take up a claim in Kansas. Then she went on: "I think that may be if I asked you you would let me take a claim of 160 acres for a farm. I am strong and hearty, and as

willing to work as any man. My ma says that I have ambition enough to run a splendid farm. I could get my father to break the land for me, and I will agree to fence it all around with willows, and I have got half a peck of maple seeds that I could make a nice grove with, if you will please give me the land. If I was there I would give you a good hug and a sweet kiss if you will only give me a deed to 160 acres of land in Kansas." The Commissioner of the landoffice informed her that a homesteader must be at least 21 years of age and the head of a family.

GOOD HEALTH.

Charcoal in Dentifrices.

A correspondent, who is a practical dentist of large experience, sends the *Journal of Chemistry* the following note: I noticed a paragraph from the *Chemist and Druggist*, referring to the use of different substances for dentifrice, which states that the "microscope pointed out that every particle of charcoal had proved to be a small crystal, which, acting by attrition, was hurtful to the enamel." If attrition or friction were the only objections to the use of it as a dentifrice, I imagine the consequence would not be very harmful; but it is absolutely dangerous on other grounds. Of course its antiseptic properties are not questioned, but the most serious danger arises from its pernicious effects upon the gums and soft tissues. I might add that in extreme cases the alveoli or sockets of the teeth are not exempt from its effects. It may be laid down as an invariable rule that no substance should be used as a dentifrice that contains acids or any ingredients insoluble in the secretions of the mouth. Now with regard to charcoal, the microscope reveals the fact that, no matter how finely pulverized, it is composed of minute angular crystals. These are absolutely insoluble in the mouth, and when used they work up under the free margins of the gums, and the more loose and diseased these are the greater the danger. The little carbon crystals gets imbedded in the soft tissues, acting as a constant source of irritation which is followed by inflammation. A chronic state is reached; the gums become swelled; pus exudes from their margins; and absorption of gums and alveolar processes, with ultimate loss of the teeth, is the sequel. Of course extreme results are produced only by habitual use of the article. I think all observing dental practitioners of any considerable experience will bear me out in the above statements.

BOXING CHILDREN'S EARS.—The practice of boxing children's ears is a most dangerous one. Professor Stanich, aurist, in a letter to the *Timaru Herald*, says: "As one single instance, in Canterbury I have found no less than four children in one family affected with serious deafness. One of these little ones had the drums of both ears absolutely broken, which means, of course, incurable deafness. The parents assured me that they never struck their children, but that it was in school that the boxing of the ears, which had had so fatal results, had taken place. I understand, also, that more than one schoolmaster in Timaru is in the habit of resorting to this barbarous practice as a means of punishment, and who—unwittingly, no doubt—will be answerable for many a case of deafness in years to come, when their present pupils will have reached manhood or womanhood." When the barbarous practice of beating children in school is resorted to, preferring a charge of assault against the teacher would have a moderating influence. If children are utterly disorderly they should be expelled the school, and the onus of punishment thrown on the parents, who, if they neglect the proper correction of their children, would have the pleasant reflection that the reformatories or training schools would be the places to which incorrigible children would be sent.

WARM AND DRY FEET.—Life long discomfort and sudden death, writes a medical man, often comes to children through the inattention or carelessness of the mothers or nurses. A child should never be allowed to go to sleep with cold feet; the thing to be last attended to is to see that the feet are dry and warm. Neglect of this has often resulted in dangerous attacks of croup, diphtheria, or fatal sore throat. Always on coming from school, on entering the house from a visit or errand in rainy, muddy, or damp weather, the child should remove its shoes, and the mother herself should ascertain whether the stockings are in the least damp. If they are, they should be taken off, the feet held before the fire, and rubbed with the hands till perfectly dry, and another pair of stockings and another pair of shoes put on. The reserve shoes and stockings should be kept ready for use on a minute's notice.

HOW TO KILL A TAPEWORM IN AN HOUR.—Dr. Karl Bettelheim, of Vienna, narrates, in the *Deutsches Archiv*, a heroic method and nearly sure cure in the short space of time of three quarters of an hour to two hours. It is this: He inserts a tube in the oesophagus, to the stomach, and pours down from 200 to 400 grammes of a very concentrated decoction of pomegranate root, having previously had his patient fast for 24 hours. The worm is stupefied, and passed, head and all, to a certainty; the patient has no sickness of the stomach, and no nauseous swallowing to do; and the drug is cheap.

DOMESTIC ECONOMY.

Champagne Cider.

Any good, mild-flavored apple can be converted into an excellent beverage. To make a choice article the apples should be ripe and sound, free from stems and leaves; and, when ground, the pomace should lie in the vat from eighteen to twenty-four hours. This gives a good body, richness, color and flavor to the cider that cannot be obtained when worked immediately under the press. As it goes into the cask do not use straw in a wooden funnel to strain or separate the sediment or pomace from the juice, but strain the sweet cider through flannel, which will separate most all the sediment, which must be worked out at the bung or otherwise removed for it is mainly this sediment that sours the cider and makes it "hard." That which man neglects to do, nature strives to assist. After it has been filtered, fill clean, well hooped casks and put them in a dark, cool cellar. Take out the bung and keep the cask full; let it work half the usual time, then bung tight and let it stand a few days. Then draw off the cider from the sediment which lies in the bottom of the cask. If you desire a drink of extra fine, return the cider after the cask has been well washed out, let it remain a few days, then repeat the process and after the sediment has the second time all been removed, fill up the barrel and cork up tight. This cider, in this condition, will keep one year. Or, to convert it into sparkling drink, good champagne cider, or wine cider, bottle it up with good corks in common bottles as soon as the second draft is made, and expose it to the light and air as little as possible if you wish to retain the gases and the life of the article. Add one good raisin to each bottle and drink at your leisure. This makes a pleasant, exhilarating drink. One quart should be used sparingly for several meals. It should be used only at meal time, then it is taken up and disseminated with the food, and is very healthful and strengthening as a beverage antidote for dyspepsia and jaundice. When cider is drawn from the cask some leave a vent; this lets out the gases and destroys the life of the cider; so does the mixing up mustard seeds in the barrel; the cider becomes so weak and insipid that it will not change into vinegar. The life principles are destroyed. Other nostrums should be avoided, such as some use to keep the cider plain and sweet. Bottled cider should lie on the earth in a dark cellar until wanted for use.

DOING UP MEN'S LINEN.—Some time ago my husband used to complain that his linen collars did not set nicely in front. There was always a fullness which, in the case of standing collars, was particularly trying to a man who felt a good deal of pride in the dressing of his neck, as it spoiled the effect of his cravat, and often left a gap for the display of either the collar band of the shirt or a half-inch of bare skin. While talking with a particular shirt maker one day he mentioned his annoyance, and inquired if there was any means of relieving it. "Yes," answered the man, "the fault is with your laundress. While doing up your collars she stretches them the wrong way. Damp linen is very pliable, and a good pull will alter a fourteen inch into a fifteen-inch collar in the twinkling of an eye. She ought to stretch them crosswise and not lengthwise. Then in straightening out your shirt bosom she makes another mistake of the same sort. They also ought to be pulled crosswise instead of lengthwise, particularly in the neighborhood of the neck. A lengthwise pull draws the front of the neckband somewhat directly under your chin, where it was never meant to go, and of course that spoils the set of your collar. With the front of your weekband an inch too high, and your collar an inch too long, you have a most undesirable combination." The speaker was right. As soon as my husband ordered the necessary changes to be made in the method of our laundry, a wonderful difference manifested itself in the appearance of that most important of his clad anatomy—his neck. Let me commend the shirt-maker's hint to other distressed men.—*Cor. Evening Post*.

HOW TO KEEP POTATOES.—An Alsace-Lorraine agricultural journal gives the following description of a method of preparing potatoes for long keeping, which is largely practiced in many parts of France. A large kettle or boiler of water being placed over the fire, and its contents raised to boiling point, the potatoes, previously well washed, are placed, a few at a time, in small baskets or nets, which are then rapidly thrust under water and there retained for about four seconds. Of course, the introduction of so considerable a bulk of cold matter lowers the temperature of the water somewhat, and care must be taken that it rises to the boiling point again after each immersion before a fresh netful of potatoes is introduced. As each batch is withdrawn it must be shaken, and spread out on the flooring to dry, in some well aired place. When all the stock has thus been treated, and is thoroughly dry, it should be stored away in some dark room, of course free from damp. The potatoes will be found to have lost all tendency to germination, and will remain sound and well flavored till the next year's crop comes in. It is said to be in this manner that Parisian hotel and restaurant keepers preserve their supplies so well for summer use.



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G. H. STRONG

SAN FRANCISCO:

Saturday, November 2, 1878.

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The Week.

The long continuance of heat and a scorching boreas in October is still the uppermost theme in wayside conferences. Men blessed with deep memories are busy pumping up recollections of the years since '50, and so far as we have heard their expressions, the present October is unusual in its duration of heat, and the conclusion is: "look out, next month, for the heavens will break loose." But people listen and wonder and doubt whether temperature has anything to do with rainfall; and are as careless of prophesied floods as were the wicked when good old Noah was building his marine menagerie. But whatever the future effect of this prolonged heat will be, there is no doubt of its immediate results. Even in houses long built, panels pop apart, flooring shows its tongue; plaster exposes its hair through rents in its white cap; windows rattle in their cases; indeed the timid hear noises at night from the shrinking joists and studs which greet the ear like pistol shots. Plants which have faced the long summer with open mien, shrivel and curl their features in the arid atmosphere. Nor is humanity untouched, but seems to shrink in its clothes by the quick evaporation of the weight of water which bodies hold. The soil has lost the greater part of the moisture from the last storm, for in the same field that we dug two weeks ago to find the depth of moisture, we hacked hard this morning to find the dampness slight indeed. But it all comes in a lifetime they say, and it may not be long ere we shall be hanging drenched clothes before the fire and wondering if there ever was dust out of doors.

Vagrancy and Crime.

We have lately expressed, in as forcible words as we could command, our condemnation of men who endeavor by legal means to rob the helpless and those who administer high trusts for their own aggrandizement and not for the public good. The glaring evils which have been disclosed in the deeds of those who only lately held the people's esteem, are warnings against pinning one's faith too freely upon anyone until his habits and methods are clearly understood. Some events which have fallen under our observation during the last week lead us to remark the evil which is being done to society by the lower grade of public enemies.

"Judge," said a rural justice of the peace, to a lawyer of high standing, in our hearing; "Judge, why can we not under the vagrant act of this State rid ourselves of the intolerable nuisance of tramps? It has got so now that a man is afraid to leave his home even in the daytime, for fear that his family will be robbed, insulted, or worse, by these low-lived tramps who are coming in groups to our houses at all hours of the day. I have thought they might almost all of them be arrested and imprisoned under the existing vagrant act."

"They could be," replied the Judge, "and they ought to be. All you have to do is to establish the fact that they are without visible means of support or are doing nothing to earn a livelihood, and they can be committed under the vagrant article in the code. It is easy to establish this fact, for most of them will admit that they are doing nothing, but gaining their living as common vagrants. I believe the evil could be materially reduced if the justices of the peace throughout the State should enforce this provision of the code against those who are a burden upon honest workers and in fact thieves, incendiaries and criminals of the worst class. Any justice who will begin this work will do a great service to his neighborhood."

This conversation which we overheard on the cars the other day, was called forth by the incendiary fires, house breakings and increasing number of tramps which are observed in the Alameda valley, and we doubt not in other parts of the State as well. People living in the country only know what a burden, a menace and a positive evil are the gangs of outcasts who tread our highways and gain food from our kitchens while they plot and execute their abominable crimes and outrages. The question is, what shall be done? It is well known that but few of these wanderers will work if work is held out to them. If they do a job it is because they cannot get food without it, and as soon as the meal is obtained they take to the road again. What can be done with such men except to repress them by legal means. If the existing provisions of the code covers such cases it should by all means be enforced. For the time being the State could better afford to board the whole army of tramps in the jails and prisons than to have them preying upon the community, making the rural housewife's life a continual fear, burning barns, warehouses and stacks, destroying and stealing property enough in a night to pay the jail expenses for a month. If it be that the code affords immediate relief, there should be concerted action among all ranchers to bring the vagrants before a justice of the peace and have them placed where they can do no harm before their evil deeds grow greater. This point should be looked into and proper action taken by the members of every country community.

Although imprisonment under the code may serve a present purpose and exert a repressing effect upon the floating element which now endangers rural comfort and prosperity, it is not so good as something which can be had hereafter if the people are determined upon it. There can be no doubt that it is now altogether too easy to get a livelihood by tramping. It is so easy that the life has a fascination for hundreds of depraved, idle and ambitionless individuals. There is such indolence and ease about it that an occasional pinch of hunger is no obstacle to its pursuit. The true theory to meet the difficulty is to enforce labor and turn its products to the public account in compensation for the expense which the public has to incur for corrective measures. Other States have systems for forcing vagrants to earn their living, and they are said to exert most beneficial effects. The enactment of such laws in this State has been urged by some of our inter-

rior exchanges, who know the extent of the evil as we, from our residence in the country, know it. As the evil seems to be growing, as the evil life of the tramp seems to make him bolder each year and more ready to transact robbery and outrage together with his beggary, it is plain that a comprehensive and effective act for forcing the vagrant to labor for his support on public enterprises must be adopted in the future as a measure of public safety. Many months will elapse before we can have a legislature to enact a law of this kind, and before it convenes the subject should be fully discussed in the light of all the experience of the older commonwealths. In such discussion we are ready to take an active part. But what shall be done now? It will not do to let the burning and robbery go on for another year. It is not wise to let a desperate class have free course over our property, waiting until the wrongs are done and then pursuing individuals in the hope of thrusting them in State's prison after the fruits of our toil are destroyed. What is the immediate remedy? Is it in the enforcement of the code as the Judge suggested? If so, what community will act in its own defence and lead the way for other tramp-ridden communities to follow?

ALMONDS AND RAISINS IN LONDON.—Our trade advices from London are received up to October 1st, and we perceive a notable advance in the market values of new almonds and raisins during the month of September. It will doubtless interest our producers to see the present value, and the increase during September, and we give the facts below, reducing shillings to dollars per cwt:

	September 1st.	October 1st.
Almonds Jordan.....	\$38.50@44	\$42.50@47
" Barbary soft shell \$11@11.50	\$11	\$11.50
" sweet.....	\$22.50@23.50	\$22.50@23.50
Raisins Muscatel layers.....	\$8.75@12.50	\$12.50@33.75

There were no new Barbary sweet almonds in the market September 1st. The advance on the Spanish muscatel raisins during the month was, it appears above, from about 33% on the poorer to about 270% on the best. This must confirm previous announcements of a short crop at Malaga, and the advance in consequence should be to the advantage of all California raisins which can come into competition with the Spanish muscatels.

TRICHINOSIS IN BADGERS.—It is well known that rats and mice sometimes harbor trichiniae, and that larger animals eating their flesh become infected. The London Farmer announces that a correspondent of the *National Zeitung*, writing from Guben, states that a badger recently shot in that neighborhood was found on examination to be infested with trichiniae. It was by accident only that this discovery was made, one of a company of sportsmen who had determined on snipping on the animal in question having amused himself by submitting a portion of its muscular fiber to microscopical examination. We have badgers in this State, but we have never heard of trichiniae being found in them. Microscopists who have badger meat available should look for the parasites. Meantime, let those who eat badger meat cook it well.

LOSS OF CATTLE.—We learn from the *Healdsburg Flag* that a number of cattle belonging to J. W. Calhoun, of Windsor, have been lost from eating green corn fodder after hogs had recourse to it. This disease, and the proper treatment for it, were fully described in the *RURAL* of August 24th, 1878. It is known as the "mad itch," from the disposition of the cattle to rub their heads against anything which they can find, and thereby sometimes lacerating themselves terribly. Any of our readers who may have the trouble in their herds from the use of green corn fodder, whether previously visited by hogs or not, should hunt up the *RURAL* for August 24th, and apply the remedies vigorously.

SALMON WITH TAGS.—The Fish Commissioners announce that a number of female salmon, after being spawned at the fishery on the McCloud river, were returned to the river, marked with a small silver tag, numbered and fastened by a small platinum wire to the dorsal fin. The object is to see if they live to return to salt water again from such a distance. Should any of these fish be caught, the party catching them will confer a favor by reporting the fact to the United States Fishery, Baird, Shasta county, California.

SAN DIEGO shipped, on Oct. 25th, 1,500 cases and 30 barrels of honey.

QUERIES AND REPLIES.

Warts on Cattle.

EDITORS PRESS:—I write to make inquiry of you and through your paper about a disease which affects some of our young cattle. I have a two-year-old heifer on which, in a few days, a large crop of something like warts came on her legs; a few on her body. They are so numerous on her fore legs as to almost pile on each other. They do not appear to be sore, but the tops tear off easily and bleed freely, causing trouble with flies and worms. The warts have no hair on them; protrude about half an inch; flat on surface and larger on surface than at base. My neighbors have some in the same condition. The cattle do not appear to be sick at all, as yet.—S. N. COCHRAN, Westminster, Los Angeles county, Cal.

Warts are quite a common affliction on cattle, and when they appear around the eyes or on the bag are more troublesome and difficult to cure than on the part our querist names. We have seen them removed by daily moistening the surface of the wart with a mixture of three parts crystal carbolic acid and one part of glycerine, placed in a bottle and held in warm water until the crystals melt. The application is made with a small swab. This is a slow and safe process, and is especially adapted to use on delicate parts of the body. An effective method with warts like those our querist describes would be to cut them off, a few at a time, perhaps, with a sharp knife, and touch the root with lunar caustic. Another way would be to tie a strong ligature, a "waxed end" or a piece of saddler's silk, around the base of the wart and it will soon fall off if the cord is drawn tightly enough.

Liberia Coffee.

EDITORS PRESS:—Experience in coffee planting in California does not justify us yet in saying that such an industry will be a success; but perhaps there is enough to warrant further experiments and justify the efforts made already. When I urged my friends to try Liberia coffee, it was because I had Mr. Morris' assurances that it was a distinct variety of peculiar merit, and this seems to have been established by expert investigators. The reason that the seed Mr. Morris furnished did not more generally vegetate is explained by the suggestion that the seeds, to "travel well," should be "packed in damp moss." Messrs. E. S. Morris & Co., Philadelphia, Pa., have about 200 well-grown plants of the Liberia coffee in our Centennial Horticultural Hall, which they are willing to dispose of at reasonable price.—HORACE J. SMITH, George's Hill, Philadelphia.

We print the foregoing for the information of those who are interested in experiments of this kind. There is no doubt about the excellence of the Liberia coffee, but whether coffee-growing will ever amount to anything in this State is just about as doubtful as ever—if not more so, as the boy said.

Red Spider—Woolly Aphis.

EDITORS PRESS:—I have been shown some late numbers of your very instructive journal, and in that of October 5th I read a communication from your correspondent, C. W. O., about the woolly aphis (*Aphis lanigera*), and a small red insect that has attacked the almond. I think from what C. W. O. says, it is what is known as red spider. When a tree is infested the leaves change to a light, sickly green, and on very close examination will be found a very minute red insect, changing to dark red with age. It is easily destroyed, as you recommended, by a strong application of soapsuds.

The woolly aphis on apples can be cured with equal parts water and turpentine, applied with a small brush to the afflicted parts; if on the roots the soil should be removed carefully, the mixture applied where needed, and the soil returned half an hour after.—A. C., Los Angeles.

Wild Tea.

EDITORS PRESS:—Can you tell me what the plant is which is known in some parts of the country as "wild tea," and whether it is a native of California or not?—I. H., Contra Costa Co.

Mr. Harford, of the Academy of Science, informs us that a number of species of *Ceanothus* are commonly called "wild tea." If our querist wishes the specific name of the plant to which she refers, we can get it if specimens are sent.

Cream and Butter.

A querist on these themes, in Los Angeles, forgets to send his name as an evidence that his queries are asked in good faith.

ON FILE:—"Tulare County Fruits," etc., J. W. A. W.; "Satisfactory Flower Garden," etc., C. H. S.; "Present and Future," J. T.; "The Labor Question," L. C.; "Saving Beans from the Wet," "Window Gardening," G. H.; "Wolf Teeth," J. K.; "Economy and Molasses," S. P. S.

Our House in Berkeley.

After a full apprenticeship in the boarding-house system and a due course of subsistence upon his wife's relations, the editor of the *RURAL PRESS* has built a cosy little corral for his wife and babies in the pretty village of Berkeley, and now proposes to practice the arts of home-making, hoping to realize the joys which his pen has often pictured in these columns. In the progress of house building, there were of course architect's drawings and these we have had reduced to engravings so that our readers might have the benefit of drawing suggestions from them, if any features should seem to meet their tastes and needs. The design is not proposed for a strictly country house; for that it is not adapted, but many of our readers dwell in villages and the suburbs of cities and to them something like that we have chosen for ourselves may prove acceptable.

As will be seen we have chosen a design which introduces a degree of ornamentation. This we believe will consort well with growths of shrubs and flowering plants with which we shall encompass the house round about, and with the general features of the suburban landscape. The house was designed for us by Meeker & Banks, architects, Thurlow Block, Kearny street, San Francisco. They are architects of high standing, for the taste of their designs as well as in the practical working, definiteness of their specifications and detail drawings.

The interior division of the house may be learned from a study of the floor plans. It will not be necessary to comment at length upon the advantages of the arrangement of rooms we have chosen. We would remark, however, that by the removal of the stairs from the place they usually occupy in small houses (directly facing the front door) we gain a more spacious entrance hall, the effect of which, as the front door opens, is to impress one with the "roominess" of the house at once. Another point is that the house is so located and its windows so distributed that every room, except the small chamber off the kitchen, has the sunlight at some time in the day, and each one has the chance for fire either in stove or grate. The principal living rooms are subject to the glance of old Sol almost from his rising to his setting. The right hand rear chamber up stairs will be the babies' daytime kingdom, and it receives a flood of sunshine. The front chamber, which will be the mother's realm, has an open fire-place on one side and 64 square feet of sunlight on the other. It opens into an alcove for a dressing room, and thence directly into the bath room, thus giving conveniences and comforts which we too often overlook in house planning. Our lady readers will gain another idea of the convenience of our house when we state that there are five good sized closets, two of them large and furnished with deep drawers for linen.

In his drawing of the floor plans, the architect committed us to a "parlor," but the house in reality contains none, in the usual use of the term. Everyone has his hobbies and prejudices, and we claim the right to expunge the parlor from our home dictionary. In mansions where wealth enables the owner to fill an elegant apartment with rare paintings and tapestries; where the feet sink into the soft welcome of Persian carpets and the eye regales itself upon gems of sculpture and costly bric-a-brac—with such possessions, it is right to have a parlor, because the mansion is spacious enough to furnish perhaps a dozen other finely situated rooms for living purposes. But in a small house, whose owner has nothing requiring the seclusion of the

museum, we count it simple folly to shut the light from the best room in the house and pass one's life in back rooms in fear of an idol of a parlor—hollow as old Moloch. And when we thus protest against the stiff and empty "best room" of many small houses, we do not mean that our best room shall be wanting in any respect to our guests who are welcomed to it. Will not they feel the more at home if they find the lights already burning in the room into which they are ushered? Will an open piano be less respectful than one closed and covered with a dusty pall? Will bookcases be less cordial than silent walls? Will a fragrant bouquet

up our home theories and closet ourselves in a rear chamber upstairs, while the gaslight falls upon the rustling dresses of our queenly daughters as they entertain insipid young men in our "best room" below. But we laugh while we may—the scepter is still in the hands of Israel, why should we anticipate the captivity? We have evidently drifted into a reverie.

One of the most interesting and practical questions in connection with house building is the cost, and having built the house we can give the figures exactly. The total cost of designing, supervising, construction and materials is \$2,805. The house was built on contract by

rare plants for our garden. These we shall cherish. One friend with an eye to our wants has planted a vigorous mortgage on our lot and, though this plant has been found likely to spread in all climates and on all soils, we shall do our best to try the effect of a monthly pruning upon it if our life and health are spared.

Passion Fruit Again.

The fruit with which the *PRESS* is evidently unacquainted, is the *Granadilla* (not *Grenadilla*), *Granadilla quadrangularis*. There are several varieties of this fruit, the cultivated sort often growing as large as a person's head. A smaller variety, holding about half pint of pulp, grows wild. The skin can be preserved like citron. We have repeatedly introduced the *Granadilla* seed into Florida, but never succeeded in getting it to vegetate; we are not aware that others, to whom we gave seed, have done so. The fruit is said to have been named from Granada, a town in Spain, the word signifying a pomegranate, and *Granadilla*, a small pomegranate. This is the explanation given regarding it by some writers, but we see no similarity between the pomegranate and the *Granadilla* to warrant the nomenclature.—*Florida Agriculturist*.

The above is an allusion to the fruit sent us by Mr. Grelek of Los Angeles, and described in the *PRESS* of August 31st. We are thankful to our Florida contemporary for the disposition to set us right, and on one point we accept the amendment, and that is on the spelling of "*Granadilla*." We followed the early edition of "*Rhind's Vegetable Kingdom*;" the late edition (1874) which we have since seen,

makes the correction noted by our Florida friend. Beyond this point the *Agriculturist* is at sea. The proper botanical name of the plant which he mentions is *Passiflora quadrangularis*, not "*Granadilla quadrangularis*"—this form being a mixture of popular and botanical terms, according to the best light we can get on the subject. The fruit sent by Mr. Grelek was not *p. quadrangularis*, as stated above. It was only about half large enough, did not contain more than a tablespoonful of pulp and it had a hard shell, so hard that our knife broke its course through it and left the edges rough like saw teeth. You could no more make citron of the rind than you could of a dry chestnut shell.

We are not altogether unacquainted with *P. quadrangularis*. It is growing here, and no one would be likely to mistake it for the fruit sent us from Los Angeles than he would to take an egg plant for pomegranate. It is evident that the editor of the *Agriculturist* also knows the *quadrangularis*, and if he had enjoyed the advantage of seeing the Los Angeles fruit would not have erred concerning it. In case any of our readers may desire to know more about the *quadrangularis*, we subjoin the following description from the latest edition of "*Rhind's Vegetable Kingdom*."

"The *Granadilla* vine (*P. quadrangularis*) has a square stalk, and leaves five to six inches in length. The flowers are red within and white outside. They are odoriferous, and generally the plant is covered with fruit and flowers at the same time. The fruit is very large, being an oblong, of about six inches in diameter from the stalk to the eye, and 15 inches in circumference. Externally, it is greenish yellow; when ripe, soft and leathery to the touch, and quite smooth. The rind is very thick, the pulp is of a purple color, and is eaten with wine and sugar. It has a sweet slightly acid flavor, and is very grateful to the taste."

THE Acting Secretary of the Interior recommends that the survey of the rancho Huasna, San Luis Obispo county, made in 1872, by the Surveyor-General of California, be approved.

LARGE quantities of good dairy salt is being manufactured in eastern Yavapai, Arizona.

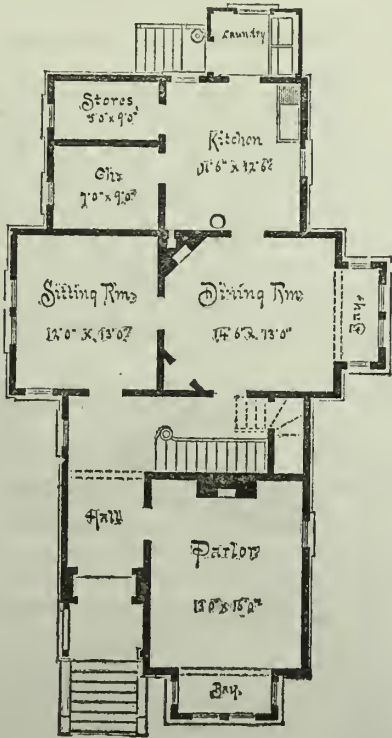


DESIGN FOR A VILLAGE OR SUBURBAN COTTAGE.

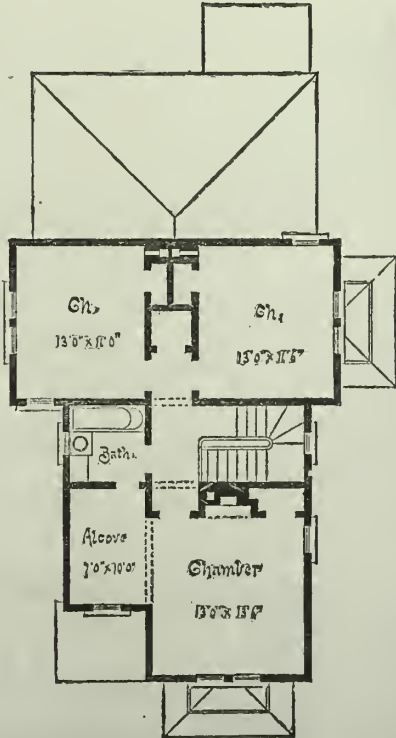
of fresh flowers be less dignified than a case of faded waxen imitations? And, not to ride our hobby too far, which would our guests choose to contemplate, a couple of embroidered puppies on stately Ottomans, or a brace of buxome babies, catching the sunbeams on the carpet or romping before the open fire in the winter

Haskell & Smiley, of Oakland, and the construction was supervised by Carnall & Eyre, of Berkeley.

And now having built our house, the editor can but announce that the doors are ajar to all friends of the *RURAL* family. Within the very limited measure of our space we propose to



FIRST FLOOR.



SECOND FLOOR.

twilight? Yes, we shall have a "best room," and our friends shall be brought into it—but they will find the family already in possession of its comforts. We vaunt ourselves in the best part of the house while we may; for our daughters are in their babyhood. There may come a time, when, to make room for the rising generation of girls, we shall be forced to pack

make our ground interesting and instructive by the growth of beautiful plants and shrubs and for the test of minor growths which are proposed for introduction in the cooler regions of our State; as we are too near the bay to attempt strictly semi-tropical vegetation. Several friends who have heard of our home-making have informed us that they had marked some

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A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

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A. J. TWOGOOD, Riverside, Cal., Importer and Breeder of Pure Bred Poland-China Hogs.

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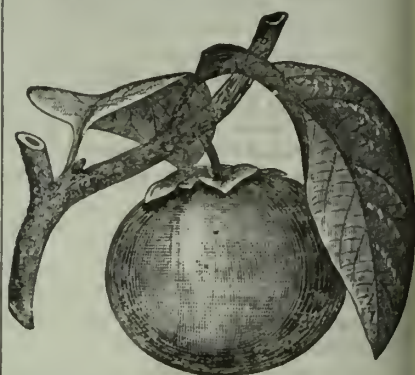
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The undersigned, having formed a partnership to carry on the business of General Publishers under the firm name and style of Dewey & Co., Publishers, this certifies that the principal place of business of said partnership is situated at 202 Sansome street, in the city of San Francisco, State of California; and that Alfred T. Dewey, residing in the city of Oakland, State of California, and Warren B. Ewer, residing in the city of San Francisco, State of California, are all the members of said partnership.

ALFRED T. DEWEY,

W. B. EWER,

CITY AND COUNTY OF SAN FRANCISCO. }

On this second day of October, in the year one thousand eight hundred and seventy-eight, before me, Chas. E. Kelley, a Notary Public in and for the said city and county, personally appeared Alfred T. Dewey and W. B. Ewer, known to me to be the persons whose names are subscribed to the within instrument, and they acknowledged to me that they executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

CHAS. E. KELLEY,

Notary Public.

Endorsed—Filed October 7th, 1878.

THOS. H. REYNOLDS, County Clerk.

By J. WHALEN, Deputy Clerk.

CERTIFICATE OF PARTNERSHIP.

The undersigned, having formed a partnership to carry on the business of Patent Agents under the firm name and style of Dewey & Co., Patent Agents, this certifies that the principal place of business of said partnership is situated at 202 Sansome street, in the city of San Francisco, State of California; and that Alfred T. Dewey, residing in the city of Oakland, State of California, and Warren B. Ewer, residing in the city of San Francisco, State of California, and George H. Strong, residing in the city of Oakland, State of California, are all the members of said partnership.

ALFRED T. DEWEY,

W. B. EWER,

Geo. H. STRONG,

CITY AND COUNTY OF SAN FRANCISCO. }

On this second day of October, one thousand eight hundred and seventy-eight, before me, Chas. E. Kelley, a Notary Public in and for the said city and county, personally appeared Alfred T. Dewey, W. B. Ewer, and George H. Strong, known to me to be the persons whose names are subscribed to the within instrument, and they acknowledged to me that they executed the same.

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CHAS. E. KELLEY,

Notary Public.

Endorsed—Filed October 7th, 1878.

THOS. H. REYNOLDS, County Clerk.

By J. WHALEN, Deputy Clerk.

INSTALLMENT NOTICE.

GRANGERS' BANK OF CALIFORNIA. }

OFFICE: N. E. COR. CAL. AND DAVIS STS., S. F.

Notice is hereby given that at a meeting of the Directors, held on the 8th day of October, 1878, an Installment (No. 4) of Ten (10%) per cent., equal to Ten (\$10) dollars per share, was levied upon the Capital Stock of the Bank, payable immediately, in U. S. Gold Coin, to the Cashier at the office of the Bank. Any Stock upon which this Installment shall remain unpaid on the 1st day of December, 1878, will be Delinquent and disposed of according to law.

G. W. COLBY, President.

FRANK McMULLEN, Sec'y.

San Francisco, October 14th, 1878.

DIVIDEND NOTICE.

Notice is also given that a Dividend (No. 4) of Ten (10%) per cent., equal to Three (\$3) dollars per share, on the paid up Capital of the Bank, was declared at the same time and place; due and payable immediately at the office of the Bank as above stated.

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1st.—It holds the bed clothes firmly to the footboard without injuring them in any way. 2d.—If the covering is short, the clamps will hold them in place, when nothing else will. 3d.—Clothing can be adjusted when clamped at the foot as well in the dark as in the light. 4th.—For cribs and children's beds, it has no equal. 5th.—A woman can change clothing and make up three beds quicker and easier than she can make one without it. 6th.—When sheets are not to be changed, the clothes can be adjusted in two minutes. 7th.—Spreading on bedding with footboard turned down is as convenient as laying cloth on a table. 8th.—It hides all inequalities and leaves the bed covering much smoother than it can be made by tucking under. 9th.—The bedding can be thrown back over chairs to ventilate without opening the clamps, and adjusted again as easily as closing a book. 10th.—Turn down the footboard and the bedding can be removed in a body or separately much easier than from other beds. The Fixtures Can be Applied to any Bed, New or Old.

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Attorneys for Land Claimants.

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As a horse medicine it is superior to any liniment ever invented. For RINGBONE, SPRAIN, SWELLING, CALLOUS LUMPS, and all OLD SORES, apply freely so as to blister, from three to five days in succession, and in four or five days, if not cured, repeat as at first. SPRAINS, STIFF JOINTS, BRUISES, WINDGALLS, and all slight ailments, apply a small quantity so as not to blister. Saddle Sores, Cuts, and all other sores where the skin is broken, mix the liniment half and half with any kind of oil, and apply in moderation.

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\$4,000.—Two Hundred Acres of Land in Mendocino County.

Thirty miles from the county seat, and 20 miles from the Coast, one of the healthiest localities in the State especially for consumptives. The place is fenced off in six different fields. Plenty of water and timber for all purposes. A good orchard. Vegetables of all kinds grow well. A good dwelling with six rooms, celled and painted inside, good frame barn, granary, storehouse, smokehouse, etc.

Also, Six Hundred acres of grazing land, well fenced, three miles from the above farm, plenty of water and timber for all purposes. Price, \$2,250.

For further particulars, address "B. T." care of DEWEY & CO., PACIFIC RURAL PRESS office, San Francisco, Cal.

STOCK RANCE

TO LET.

Several thousand acres, at a very low

rate. Apply soon to EDWARD

FRISBIE, Proprietor, on the Reading

Grant, Anderson, Shasta County,

California.

A Good Dairy Ranch For Sale

On Bear River, Humboldt County, Cal., containing 600 acres of as good grazing land as any in the State. New Dairy and Dwelling House. The land is well watered, and plenty of timber for firewood and shelter, and well fenced. I will also sell with the ranch 100 head of choice dairy cows and five horses. Price, \$13,000, one-half down, the remainder on easy terms for one, two or three years. Apply either in person or by letter to EDWARD JOHNSTON, Post-office address, Myrtle Grove, Humboldt County, Cal., or to R. J. JOHNSTON, No. 1,324 Howard Street, San Francisco.

BEE RANCH FOR SALE.

One of the best ranges in the State. At present working 375 stands Italian Bees. Apply for particulars to

D. W. McLEOD,

Riverside

GRAPE DRIERS, ATTENTION!

Parties who cannot perfectly cure their Grapes by the sun can make liberal arrangements to either sell them or have them cured on my Driers, by applying to

GEO. A. DEITZ,

No. 81 J Street, Sacramento, California.

New Red Raspberry.

Henrietta, Berries 3 1/2 inches around. Twenty other varieties for fall planting. Blackberries, Currants, Grapes, etc. Circulars free. G. H. & J. H. HALE, South Glastonbury, Conn.

Stock Notices.

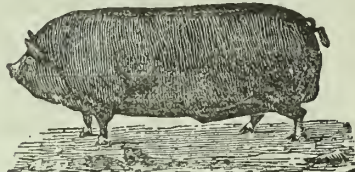
BERKSHIRES.



Breeder and Importer of the "Crown Prince," "Sam'l o," and "Bob Lee" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.

PETER SAXE, Russ House, San Francisco,

BERKSHIRE A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A streets, Sacramento City, Cal.

SPRING VALE FARM,

Three Miles N. W. of San Bernardino, Cal.



Thoroughbred Berkshire and Poland China Swine. Light Brahma and Black Cochins Chickens for sale.

T. C. STARR.

Poultry.

THOROUGHbred POULTRY.

116 Acres

DEVOTED TO

FANCY

POULTRY.



Unlimited Range.

Healthy Stock.

Largest Yards

on the Coast.

Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.

Safe arrival of Fowls and Eggs Guaranteed

Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents.

Send stamp for price list. Address M. EYRE, Napa, Cal

EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

Grangers' Bank of California,

42 California Street,

SAN FRANCISCO CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

ALBERT MONTEPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

DAVIS & SUTTON,

No. 75 Warren Street, New York

Commission Merchants in Cal. Produce.

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

Bone and Flesh Fertilizers.

We have several times expressed regret that the valuable fertilizing material in bones, offal, etc., which always collect in a great city, should in San Francisco be made of no avail to our farmers and fruit growers. We are glad to know that a new company, having invested money in securing the best machinery and appliances for turning the refuse of the city into rich and available fertilizers, is now taking steps to place these materials within the reach of our farmers, fruit and vegetable growers. We are assured that their machinery is the best that can be made, their determination is to use none but the purest materials, and to send out nothing but genuine products of full richness, which shall commend itself by actual results to all those who apply it properly to their crops and trees. As will be seen by the advertisement in another column, the Pacific Bone-Coal and Fertilizing Material Company, offers to furnish moderate-sized lots of their manufactures, at wholesale price, to those who wish to test its effects upon the crops they are growing. This is the true way to bring out material of this kind. There are hundreds of farmers who feel a need of something to stimulate their worn fields, and to bring new strength and productiveness to their orchards and small fruit plantations. They wish first to see just what effect can be produced, and to make their figures to see whether the application can be made at a profit above its cost. If the company to which we allude can show these men in their own fields that their fertilizers answer the need they feel, there is no doubt at all that the demand for the material from all parts of the State will be great, and both manufacturers and the farmers who use it will be profited.

Although we have not space at this time to go into elaborate discussion of the special values of bone and flesh fertilizers if honestly made, we can remark in a general way that there is hardly any crop grown in this State but that would not be notably increased in yield by their use. The bone meal, with its stores of phosphatic material, supplies an ingredient which is quickly taken from the soil by almost all growths of plant or fruit tree. It has also a percentage of nitrogenous material, which is readily available for plant growth, and is a powerful stimulant. The superphosphate, which is made by treating the bone material with sulphuric acid, is almost immediate in its effects upon crops which stand in need of it. The fertilizer made from offal, refuse flesh, etc., of all kinds is very rich in compounds containing nitrogen, and is wonderful in its effect upon growths to which it is adapted. All these materials have their special qualifications, and application should be made in accordance with the known composition of the material, and the needs of the crop to which application is proposed. There should also be regard to proper amount of application, for there is such a thing as stimulating growth in some crops at the expense of seed and fruit bearing, in which the grower's profit lies. There is abundant experimental knowledge on record of the use of these materials to certain crops, to serve as a guide in experiments under our conditions; but the natural and commercial questions here must be in many cases determined by fuller experiment than has yet been made before they should be used on a large scale. Therefore, we notice with pleasure the offer of this company to furnish small lots of their materials at favoring prices, so that all may test them and learn for themselves their effects.

It may truly be said, we think, that our State is waking up to the need of some measures to restore fertility in our worn soils, and increasing productiveness in our orchards and berry ranches. The wholesale commands to manure, which our farmers have been treated to by all the amateur agricultural writers, are well enough in their way; but every one who has either "practical" or "scientific" knowledge on the subject, knows that the application of fertilizers is not simply one of hauling and spreading. Under the natural conditions prevailing in this State, there are factors to take into account quite different from those to be considered in other climates and other soils. Much of the knowledge requisite for success in this direction must be worked out experimentally. Many men are now succeeding well in the use of farmyard manure in certain parts of the State, where the quidnuncs pronounced its application a positive injury. We believe it will be found ere long that not only may the supplies of yard manure be profitably supplemented by commercial fertilizers, but in locations where coarse manure is not fitted mechanically for the purposes desired, a well-made and pure manufactured manure will be found to be quickly assimilated, and to yield large returns. It is because of this belief that we advise trial of the material offered by the fertilizer company, to whose advertisement we have alluded.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING OCTOBER 15TH, 1878.

EXCAVATING MACHINES—James T. Dougine, S. F.
DOOR KNOB ATTACHMENTS—Job F. Peacock, Reno, Nev.
STEAM CYLINDER LUBRICATORS—Nicholas Seibert, S. F.
HORSE-POWERS—Chas. H. Baker, S. F.
VEHICLE SPRINGS—Horace R. Hule, Livermore, Cal.
SPRING BEDS—Ambrose S. Lattin, S. F.
PEACH PEARERS—Wm. S. Plummer, East Portland, Ogn.
FLOWS—Christian Myers, Napa, Cal.
CIGARS AND SMOKING AND CHEWING TOBACCO—Trademark—Engelbrecht, Fox & Co., S. F. (2.)

The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

WATER FOR IRRIGATION.—We have often remarked the commendable tendency to use for irrigation water from ditches originally constructed for mining purposes. Thus the investment in these ditches may be made valuable in building up our foothill agriculture. The owner of the Bear River, North Fork and Gold Hill ditches offers to supply, free of charge, for five years, from June 1st, 1878, all the water needed to irrigate orange and lemon plantations, provided each party claiming water under this offer has fifty or more trees in growing condition. He will also furnish free water for the first year to irrigate fruit trees, vines and vegetables to all persons starting new places and improving the same, provided they make application in advance to S. Washburn, Superintendent, Auburn, or to any local agent, as stated in our advertising columns.

AN ILLUSTRATED BOOK ON THE JAPAN PER-SIMMON.—A book just been published by Henry Loomis, of this city, giving a series of chromolithographic illustrations of the *Diospyros kaki* tree and fruit. There are eighteen chromos, showing nine of the best varieties of the fruit, with sectional views of the same. They are of the natural size, and the coloring is very perfect. A letter-press description accompanies the plates, and forms a neat and very attractive volume. The book will be of much interest to those interested in this fruit, which is now attracting so much attention among the horticulturists of the country. It can be obtained of the publisher, at 421 Sansome street. The tree, which so far as tried has proved itself well adapted to the soil and climate of this State, is clothed with a beautiful glossy foliage, and is worthy of cultivation for ornament alone, while the fruit has already been freely praised in these columns. It will unquestionably prove a valuable acquisition. A description of the vegetable wax plant is also included in the volume.

CALIFORNIA CARRIAGE MAKING.—One of the most praiseworthy of local manufacturing enterprises is that of H. J. Haskell, of San Jose. He is doing much to prove that we can make as good carriages in this State as can be made in the world. His establishment is large, and is taxed to its full capacity to supply the demand. No one going to San Jose should fail to visit the manufactory on the Alameda road, and see for himself the work that is being done.

Dairy Ranch Wanted.

A man who can command a reasonable amount of capital, is thoroughly experienced in the business in California, and pecuniarily responsible, wants to hire a good Dairy Farm with 100 or more cows, for one or more years; valley land preferred. Address A. D., P. O. Box 70, Oakland, Cal. Reference—Office of the "Rural Press."

Wanted—Farms to Rent and to Purchase.

I have numerous customers in search of rural property daily applying at my office. Send full particulars. Address: A. Zeelandelaar (formerly with Labor Exchange) Real Estate, Business and Employment Agency, No. 627 Sacramento street, San Francisco. (Furnishes all kind of farm labor at the shortest notice free of charge to employers.)

EVERY new subscriber who does not receive the paper and every old subscriber not credited on the label within two weeks after paying for this paper, should write personally to the publishers without delay, to secure proper credit. This is necessary to protect us and subscribers against the acts and mistakes of others.

POPULAR MUSIC.—Make your homes merry and popula with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. The RURAL PRESS can offer to introduce you there.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, October 30th, 1878.

The notable event is a better feeling in the local Wheat market, and sales at about 5c higher per cwt than a week ago. This awaking of the speculative demand is probably due to the chance for an outburst of war in Asia, in which the European powers are all directly or indirectly interested. Although there is no prospect for immediate hostilities, there is much loud talk, which will influence Wheat prices considerably if it is continued. Holders of Wheat should keep an eye on these possible influences on the market, for a jump upward may be induced at most any time.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.	
Thursday....	9s	8d@9s	9d	9s	10d@10s	1d
Friday.....	9s	7d@9s	9d	9s	9d@10s	1d
Saturday....	9s	7d@9s	9d	9s	9d@10s	1d
Sunday.....	9s	7d@9s	9d	9s	9d@10s	1d
Monday.....	9s	7d@9s	9d	9s	9d@10s	1d
Tuesday....	9s	7d@9s	9d	9s	9d@10s	1d
Wednesday..	9s	7d@9s	9d	9s	9d@10s	1d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.		Club.	
1876.....	10s	4d@10s	7d	10s 6d@10s 10d
1877.....	12s	8d@12s	—	12s 11d@13s 4d
1878.....	9s	7d@9s	9d	9s 9d@10s 1d

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Oct. 9.	WEEK. Oct. 16.	WEEK. Oct. 23.	WEEK. Oct. 30.
Flour, quartersacks..	30,256	30,254	45,568	27,713
Wheat, centals.....	388,200	241,046	251,329	258,393
Barley, centals.....	87,207	72,823	84,143	64,858
Beans, sacks.....	4,450	10,364	9,380	16,291
Corn, centals.....	1,613	3,651	2,285	2,829
Oats, centals.....	26,203	12,729	20,750	24,667
Potatoes, sacks.....	19,339	17,639	14,841	25,328
Onions, sacks.....	1,197	1,410	2,363	1,025
Wool, bales.....	5,241	5,763	6,896	6,461
Hops, bales.....	933	2,888	525	1,207
Hay, bales.....	2,349	2,404	1,708	2,279

The Foreign Review.

LONDON, October 29.—The *Mark Lane Express* says: The weather has been fine the past week. The rainfall was slight but sufficient to be of service to farmers, enabling them to commence Wheat sowing on heavy lands. Satisfactory progress has been made with field work generally, and agricultural operations have been carried on without hindrance. Supplies of English Wheat were light. There was some improvement in the condition of offerings. Values have probably reached their lowest point. Imports of foreign Wheat into London have been more moderate than of late, though fully sufficient for our requirements. Supplies were insufficient to exercise a depressing influence on prices, but the week's business has been so meagre that Wheat has been a source of profit to granary-keepers rather than to merchants. Indian Wheats are beginning to arrive more freely, for which there has been some continental inquiry, but not much from English millers.

Freights and Charters.

The *Call* says: With increased activity in the Wheat market the rates for shipping continue to improve. The ship *Haddington*, 1,271 tons, has been taken for Wheat to Great Britain, 37s 6d.

Eastern Grain Markets.

NEW YORK, October 26.—Exports of Wheat to Great Britain continue small, business there being for the moment of a hand-to-mouth order; but there is still a fair business to the Continent. Prices have remained quite stationary, with the exception of choice Winter, which has brought a little more money. The range for Spring Wheat is 84c@1s for new, with choice old held at 1s.15c@1s.16; while Winter growth is worth 90c@1s.08. These are low prices, and as there is a good prospect of our surplus crop being needed in Europe, holders are not disposed to make further concessions.

CHICAGO, October 26.—The grain markets were rather dull, and alternately firm and weak. Wheat was stronger, with a better range of prices, but no very decided tendency to advance was apparent, the strength being rather based on bad weather and slightly decreased receipts than on any great confidence in the market. Sales of December were at 81½@83½c. Corn was weaker; receipts continue much larger than last year. Sales of December at 32½@33½c. Oats were dull, but firmer, prices for December ranging at 19½@20c. Rye, for cash, 42½@43½c. Barley, cash, 99½c down to 94c. Provisions declined steadily from the opening, reaching inside prices to-day, but receding a trifle from the lowest ebb. Sales of December Pork at \$7.17½@7.70. Sales of December Lard, \$6.05@6.17½.

Eastern Wool Markets.

Boston, October 26.—For Wool the demand is quite steady, including a good average business in all grades and qualities, and prices con-

tinue well sustained, although still comparatively low and unsatisfactory. Sales of domestic are fully 200,000 pounds more than for the corresponding week last year, and Wool is rapidly passing into the hands of manufacturers. Combining and Delaine fleeces are rather more inquired for, but prices are not quite so firm. California continues to meet with good demand. Sales included 400,000 lbs., at 20@28c for Spring, and 12@18c for Fall. Prices unchanged, and 28c is the outside figure for the best Spring Wool now in the market. Fall Wool continues to arrive in poor condition, and is not desirable. Other sales include Ohio and Pennsylvania medium, No. 1, X, XX and above, at 34@38c; Michigan medium and X, at 32@34c; Wisconsin, Maine and New Hampshire, at 32@36c; combing and delaine, at 35@42c; unwashed combing, at 25@32c; Texas, at 16@27c; Lake, at 25c; Oregon, at 21@30c; tub, at 26@40c; Territory, at 15@25c; super and X pulled, at 30@40c; scoured, at 38@64c.

NEW YORK, October 26.—The market has been greatly disturbed by notice of the failure of P. Kenny, of Providence, with liabilities of \$250,000, distributed among dealers in all the Wool centers. Manufacturers still show preference for medium grades, though fine descriptions have attracted increased attention, due probably to the fact that current rates are lower, and that the present offers a favorable opportunity for stocking for the future. Dealers still offer their supplies without reserve, as the future of goods is still uncertain, though the belief is current that no further important decline will take place. California has met with only a moderate degree of attention the past week, the condition of the stock offering being of such character that buyers are not anxious to handle it. New Fall Texas is arriving freely, but its condition is poor, being very burly and seedy. In foreign, nothing of importance has been consummated. Sales for the week comprise 30,000 lbs. Spring California, at 19@25c; 2,000 lbs. scoured Fall do., 52c; 4,000 lbs. low valley Oregon, 24@26c; 3,000 lbs. Territory, 25c; 29,000 lbs. Spring Texas, 19@23c; 20,000 lbs. new Fall do., 15@19c; 1,000 lbs. scoured do., 48c.

BAGS.—The ring still clings to a mark about 14½@14¾, but the situation is evidently weakening and outside lots are now reported attainable at a reduction.

BARLEY.—Sales are rather light and slow although a choice lot of Feed grain sometimes exceeds our range of last week. We note sales: 250 sks Coast Chevalier at \$1.10; 700 do choice Bay Feed at \$1.05; 100 do at \$1.02½; 300 Coast Feed at 92½; 200 do at 90c; 250 do at 87½c, and 600 choice Brewing at \$1.23 per cwt. There are but slight changes from a week ago. Bayos are a shade lower and small white do a little better.

BUCKWHEAT.—The regular rate is \$1.50 per cwt; 137 sks sold at \$1.50, and 40 at \$1.52½ per cwt.

CORN.—Last week's prices continue without change and moderate sales.

DAIRY PRODUCE.—There is now rather more fresh roll coming than the market calls for, but prices are maintained without reduction so far. There is nothing new in Cheese except the arrival of some from New York, which is sold at 18@20 cents to those who have plenty of money and small sense enough to waste money on it.

FEED.—Hay has sold rather low this week owing to increased receipts.

FRUIT.—The Fruit list is gradually contracting. There have been arrivals of Limes from Mexico, but they were considerably damaged en route. A few changes in price may be seen in our table.

HOPS.—There is no charge in California Hops. Washington Territory now range between 8@9c, and 100 bales sold between these figures. Emmet Wells reports the New York market, for the week ending October 18th, as follows: "The general features of the market are pretty much the same as last reported. The markets in the interior are unchanged. Our latest advices from London report a dull market."

LIVESTOCK.—We note the following sales: 6,000 Hogs at 4½@4¾c per lb alive, silver; 3,000 Sheep at \$2 per head, wool on, gold; 1,700 Ewes at \$1.35 each, sheared; 220 head of Cattle, passable, \$26 each, gold; 119 Cows, good, \$19 per head; 500 Lambs, fair, \$1.25; 4 carloads Calves, large, \$11 per head, gold.

OATS.—Choice Feed have sold 5c higher than last week, but common grades are slow. We note sales of 1,000 sks black at \$1.30; 200 do good Feed at \$1.35 per cwt.

ONIONS.—Prices are unchanged.

POTATOES.—The only change is an advance in Kidneys, which holders are making a point on.

PROVISIONS.—Fresh Meat prices are without change. Bacon and Lard have declined a fraction all round.

POULTRY AND GAME.—Hens, Roosters etc., are selling regularly without much variation. Turkeys have fallen still lower. Game birds are coming in in large quantities and are low.

VEGETABLES.—String Beans, Green Corn and Tomatoes have improved, as shown in our list.

WHEAT.—A better demand for choice lots is noticeable in this market, and prices have shaded up a little. We note sales: 1,240 cwt strictly choice Milling at \$1.75; 800 do choice Milling \$1.72½; 7,000 cwt Shipping and Milling at \$1.70; 250 do good Milling at \$1.67½; 400 do

fair Milling at \$1.65; 3,000 cts off grade at \$1.55; 378 do at \$1.50; 1,000 do at \$1.45; 500 and 800 at \$1.30; 1,200 do at \$1.12; 200 do at \$1.10 per cts.

WOOL—Our quotations still cover the range of sales made. The best lots are in fair inquiry and the coming week is expected to see considerable sales. Poor lots are neglected. We note sales of 100,000 lbs fall Wool from 12½ to 17 as to quality; 25,000 Spring at 18c.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., October 30, 1878.

BEANS & PEAS.		
Bayo, cal.	2 50 @ 60	
Butter	2 50 @ 50	
Peas	2 87 @ 30	
Red	2 00 @ 20	
Pink	2 25 @ 20	
Sm'l White	2 62 @ 25	
Lima	1 00 @ 15	
Field Peas	1 00 @ 15	
BUCKEY CORN.		
Old	34 @ 7	
New	41 @ 8	
CHICORY.		
California	4 @ 41	
German	61 @ 7	
DAIRY PRODUCE, ETC.		
Cal. Fresh Roll, lb	37 @ 41	
Fancy Butter	42 @ 45	
Pickle Roll	24 @ 27	
Firkin	21 @ 25	
Western	12 @ 17	
New York	27 @ 30	
EGGS.		
Cheese, Cal. lb	8 @ 12	
N. Y. State	17 @ 18	
Gilroy Factory	11 @ 13	
Cal. fresh, doz	40 @ 45	
Ducks	30 @ 32	
Oregon	18 @ 25	
Eastern	25 @ 27	
do by express	25 @ 27	
Picked here	— @ 27	
FEED.		
Bran, ton	15 00 @ 16 00	
Corn Meal	28 00 @ 29 00	
Hay	6 50 @ 13 50	
Middlings	22 00 @ 23 50	
Old Cake Meal	24 00 @ 25 00	
Straw, bale	25 @ 60	
FLOUR.		
Extra, bbl	4 87 @ 5 37	
Superfine	3 90 @ 4 25	
Graham, lb	3 @ 34	
FRESH MEAT.		
Beef, 1st qual, lb	5 @ 54	
Second	34 @ 41	
Third	2 @ 31	
Mutton	3 @ 41	
Spring Lamb	5 @ 6	
Pork, undressed	4 @ 44	
Dressed	54 @ 6	
Veal	5 @ 7	
Milk Calves	64 @ 7	
do choice	7 @ 74	
GRAIN, ETC.		
Barley, feed, cts	85 @ 1 05	
Brewing	15 @ 25	
Chevalier	75 @ 90	
Buckwheat	1 50 @ 1	
Corn, White	10 @ 15	
Yellow	10 @ 17	
Small Round	12 @ 17	
Oats	12 @ 17	
Milling	137 @ 40	
Rye	127 @ 30	
Wheat, Shipping	1 62 @ 70	
Milling	1 67 @ 75	
Off Grades	1 40 @ 60	
HIDES.		
Hides, dry	16 @ 16	
Wet salted	74 @ 9	
HONEY, ETC.		
Beeswax, lb	30 @ 31	
Honey in comb	114 @ —	
do, No 2	8 @ 94	
Dark	8 @ 9	
Strained	5 @ 54	
HOPS.		
Oregon	— @ —	
California	8 @ 12	
Wash Ter	8 @ 9	
Old Hops	3 @ 5	
NUTS—Jobbing.		
Walnuts, Cal.	8 @ 9	
do Chile	7 @ 8	

FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., October 30, 1878.

FRUIT MARKET.		
Apples, box	75 @ 1 00	
do Cooking	35 @ 50	
Bananas, bunch	2 50 @ 5 00	
Cocoanuts, 100	5 00 @ 6 00	
Cranberries, bbl	13 @ 10	
Figs, lb	7 @ 8	
Grapes, com, bx	35 @ 50	
Grapes, chice, do	75 @ 1 00	
Limes, Mex	— @ 15 00	
do, Cal, per M	— @ —	
Lemons, Cal M	— @ 25 00	
Sicily, box	9 00 @ 10 00	
Australian, bx	7 00 @ 7 50	
Oranges, Mex	— @ —	
M	— @ —	
Tahiti	— @ —	
Cal	— @ —	
Pears, box	50 @ 2 25	
do, Bartlett	— @ —	
do, Seckle	1 50 @ —	
do, W Nellis	1 50 @ 2 25	
Pineapples, doz	3 00 @ 4 00	
Plums, lbs	5 @ 6	
Quinces, bsk	75 @ 1 00	
St'wharries, cb	7 00 @ 9 00	
DRY FRUIT.		
Apples, lb	3 @ 54	
Apricots	15 @ —	
Citron	23 @ 24	
Dates	9 @ 10	
Figs, Black	4 @ 6	
White	6 @ 8	
Peaches	18 @ 24	
do pared	18 @ 24	
Pears	8 @ 12	
Plums	3 @ 2	
Pitted	15 @ —	
Prunes	8 @ 10	
Raisins, Cal, bx	2 00 @ 2 25	
do, Halves	2 50 @ —	
do, Quarters	2 75 @ —	
Flowers, doz	75 @ —	
Malaga	2 75 @ 3 00	
Zante Currants	8 @ 10	
VEGETABLES.		
Beets, cts	50 @ —	
Beans, String	— @ 4	
Cabbage, 100 lbs	40 @ 50	
Cantaloupes, case	1 00 @ 2 50	
Carrots, cts	40 @ 50	
Cauliflower, doz	50 @ —	
Cucumbers, bx	50 @ 75	
Egg Plants, box	75 @ 1 00	
Garlic, New, lb	2 @ 24	
Green Corn, doz	10 @ 15	
Green Peas	3 @ 4	
Lettuce, doz	10 @ —	
Parasnis, lb	2 @ —	
Horseradish	8 @ —	
Squash, Marrow	— @ —	
fat, tn	5 00 @ 6 00	
Summer do, bx	50 @ 75	
Tomato, 50 lbs bx	35 @ 40	
Turnips, cts	50 @ —	
White	50 @ —	

Gold, Legal Tenders, Exchange, Etc

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, October 30, 3 P. M.

LEGAL TENDERS in S. F., 11 A. M., 99½ @ 99½. SILVER, 2 @ 1½. GOLD in New York, 100½. GOLD BARS, 890 @ 910. SILVER BARS, 8 @ 22 ½ cent. discount.

EXCHANGE on New York, ½% on London bankers, 49½ @ 49½. Commercial, 50; Paris, 2 francs @ dollar; Mexican dollars, 84½ @ 90.

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QUICKSILVER in S. F., by the disk, at 41 @ 41½.

SAN LORENZO, December 6th, 1877.

MESSRS. DEWEY & Co.—Gentlemen: I received the Letters Patent for my invention on the 5th inst., and beg to thank you for the gentlemanly and business-like manner in which you have dealt with me from the beginning of my application. I shall always feel it a pleasure to recommend you to all I come in contact with who need Letters Patent. Respectfully, Wm. DALK.

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In order to introduce our fertilizers, and to prove that we are using nothing but pure materials, and being positive that when properly used they will double the yields of most crops, and at the same time enrich the soil, we are willing to furnish small lots, of 100 pounds and upwards, at ten prices.

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I have over 5,000 acres of level land ready for the plow, on the Reading Ranch, in Shasta County (which adjoins Tehama County on the north.) Good for wheat, rye, barley, oats and corn. Crops have never been known to fail on this or the adjoining land.

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A large portion of the tract is fine bottom land. The whole is level and fair tillable land. Rent, with improvements, from \$1.50 to \$3 per acre, ½ cash in advance, and the balance after harvest. Railroad through the tract. Excellent local market. Climate good, wood and water plenty. Rainfall averages about 30 inches. Come and see the land.

EDWARD FRISBIE, PROP'R. Anderson, Shasta Co., Cal.

Come and See.

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— FOR —

ORANGE AND LEMON GROVES, In Placer County, Cal.

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S. WASHBURN, Sup't,

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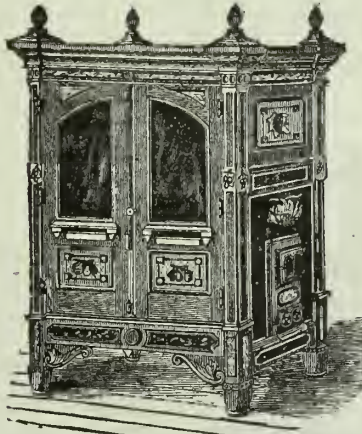
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It bakes Bread, Cakes and Pies, to any desired tint, without turning or watching, and without danger of burning. No better cooking can be done.

All farmers and economical housekeepers should use them. They are popular wherever introduced. See illustration and description in RURAL PRESS Oct. 26th, 1878, of different apparatus, styles and combinations, or send stamp for illustrated circulars and full description. Address,

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Wanted to lease, with a view to purchase as a permanent home,

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Schooners make the trip to Drake's Bay in six hours, and to Tomales Bay in nine hours. Produce can be shipped to market from the colony by schooner as well as by rail.

Title—United States patent.

Climate—Unsurpassed for mildness and equability.

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Water—Abundant. A failure of crop has never been known.

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Agriculture—The soil, climate and situation render this property particularly adapted to those who wish desirable homes at a short distance from San Francisco. With the exception of tropical fruits, anything that grows in California can be produced upon this land.

This rancho, famous for its dairies, is now being subdivided into 20, 40 and 80-acre farms, under the auspices of the California Immigrant Union, and will be sold at low figures.

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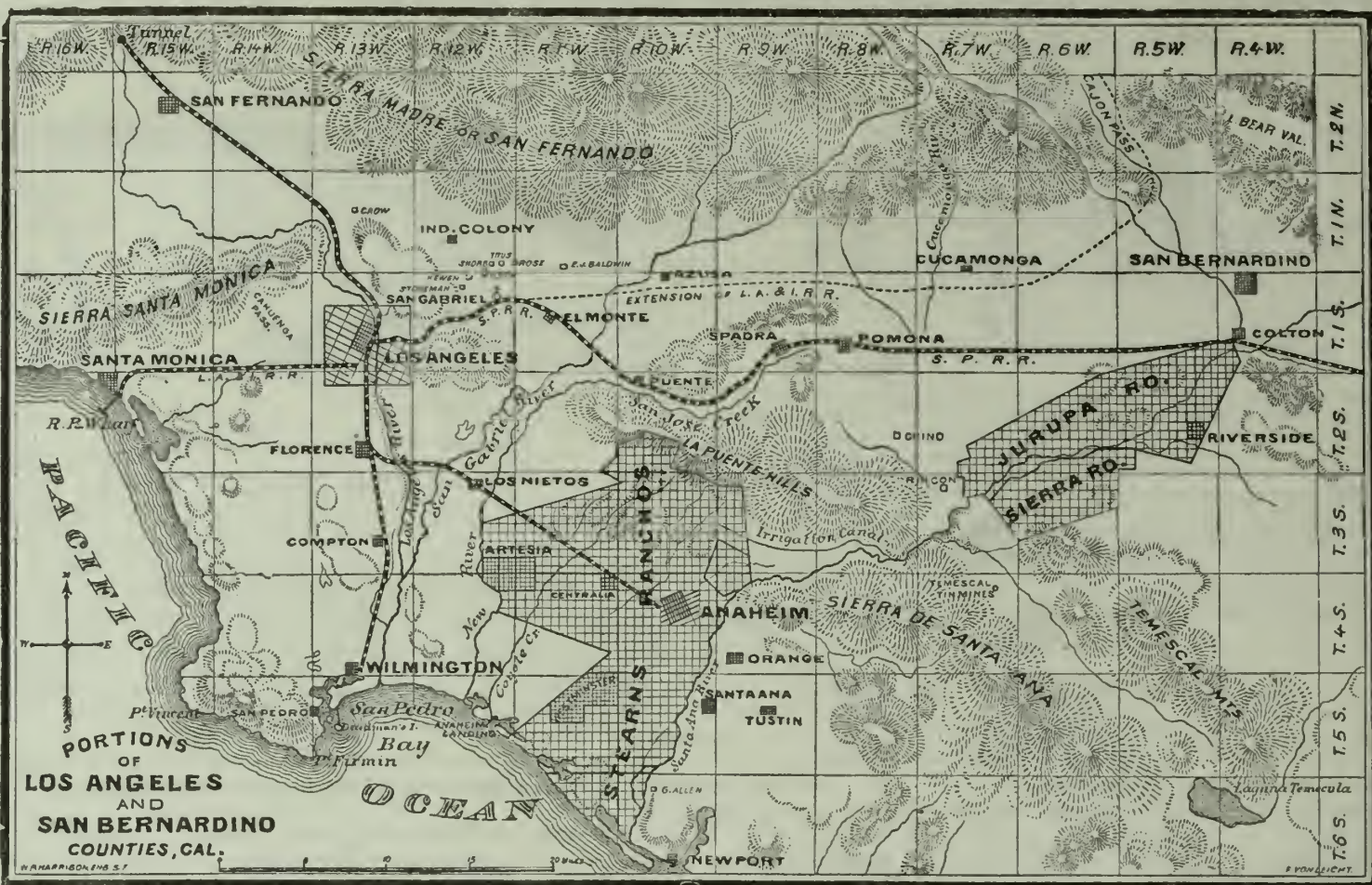
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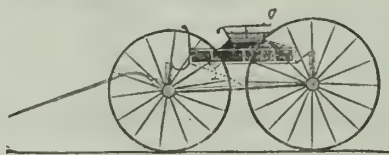
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HOUSE.

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HAY, GRAIN, HORSES and CATTLE,

That may be consigned to him, at the HIGHEST MARKET RATES, and will open a trade direct with the consumer

Without the Intervention of Middlemen.

He also asks consumers of Hay and Grain and Stock Buyers to co-operate with him, and thus have but one commission between producer and buyer. Address

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1878-9.

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FINCH'S CURE ALL—Warranted to cure all sores, old or fresh, on man or beast.

FINCH'S CELEBRATED HORSE RENOVATING MEDICINES—Used by Mountgomery Queen for many years.

Testimonials.

MR. S. FINCH.—Dear Sir: I have given your Horse Medicine a fair trial, and find that it works satisfactorily, and feel fully warranted in recommending it to the public.—Geo. B. MCKEE, San Jose, October 10th, 1878.

I fully concur in the above testimonial, having given it a thorough test.—S. A. BISHOP, Pres't S. J. & S. C. R. R. Co.

MR. S. FINCH.—Sir:—I have used your Cure All on sores of all kinds, and can say it is the best I have ever had in my barn for man or beast. I have also used your Renovating Medicine, and can fully recommend it to the public. It should be kept in every stable, even to feed occasionally to keep horses in good condition. I keep it in my stable all the time, and would recommend it to all horsemen—especially to those keeping livery and railroad horses.—R. K. HAM, Santa Clara, Cal., October 10th, 1878.

I hereby certify that I have sold Finch's Cure All in Michigan for 10 years, and it has always given good satisfaction. And for the last three or four years have sold it in San Jose, and can truly say that it is one of the best preparations for healing all manner of sores on man or beast I have ever sold.—S. H. WAGNER, Druggist, San Jose, October 19th, 1878.

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Or at WAGNER'S and RHODES Drug Stores, San Jose, Cal.

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—SOLD BY—

GEO. FINCK, JEWELER,

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Volume XVI.]

SAN FRANCISCO, SATURDAY, NOVEMBER 9, 1878.

Number 19.

The Downing Gooseberry.

The engraving on this page shows one of the varieties of gooseberries which succeeds best in this State so far as we have heard from growers. With us as with our Eastern friends the English varieties are apt to mildew, although we have seen samples grown near the coast in cool air and fogs which seemed to be as full sized and bright skinned as in their native England. In most situations, however, we have to guard against mildew and the American varieties withstand it best. The Downing is a prominent berry of this class. Our engraving is taken from a drawing from nature made for Ellwanger & Barry of Rochester, New York, who have for years made a specialty of bringing this and other fruits to the attention of fruit growers. The way in which this twig is laden shows the productiveness which is characteristic of the Downing. The variety is a seedling from the Houghton and was brought out at Newburgh, the home of the far-famed pomologist whose name it bears. The plant is a vigorous grower. The fruit is somewhat larger than Houghton, roundish oval, whitish green with ribs distinct. The skin is smooth and the flesh rather soft, juicy and good.

The gooseberry is one of the few fruits which is still produced in this State in less quantity than the demand calls for. It is impossible to say how long this condition of supply and demand will continue, but thus it ruled this year. The fruit came in early when there was little else for sauce and pies. It was green and charged with cramps for delicate stomachs, but consumers longed for something new and gooseberries ruled in the stew-pans and the pie-plates of the metropolis. The supply was chiefly drawn from a patch of several acres in the southern part of Alameda county, and sales, day after day, ranged at six and seven cents per lb. We dare not say how much the owner claimed to have cleared from his small gooseberry ranch this year, but it was in the hundreds per acre. As we said before it would not be well to found much of an enterprise on this experience for the market would soon be over-supplied, and yet the fruit is worth introducing more generally without embarking too heartily into it.

As every girl has her lover somewhere, they say, so every fruit has its champions. We never yet saw a gooseberry for which we would undergo much hardship, and yet the fruit in England is regarded almost with the pride of affection and loyalty. Concerning the origin of the gooseberry and its high esteem abroad, Mr. Downing writes as follows: "The gooseberry of our gardens is a native of the north of Europe, our native species not having much

improved by garden culture. This low prickly shrub, which in its wild state bears small round or oval fruit, about half an inch in diameter, and weighing one-fourth of an ounce, has been so greatly improved by the system of successive reproduction from the seed, and high culture by British gardeners, that it now bears fruit nearly or quite two inches in diameter, and weighing an ounce and a half. Lancashire, in England, is the meridian of the gooseberry, and to the Lancashire weavers, who seem to have taken it as a hobby, we are indebted for nearly all the surprisingly large sorts of modern date. Their annual shows exhibit this fruit in its greatest perfection, and a "Gooseberry Book" is published at Manchester every year, giving a list of all the prize sorts, etc. As a luxury for the poor, Mr. Loudon considers this the most val-

THE DESERT LAND LAW.—The decision of Commissioner Williamson, on the revival of the desert land law, of which we gave the telegraphed account last week, does not seem to affect the belief of those who all along have opposed the operations under the law in Kern county. The Visalia Delta, well located to reflect the sentiment of the part of the State most interested, says: "It is a well-known fact that the land referred to is among the best in Kern county. If it is desert land, this whole valley is a desert, because a crop cannot be depended on every year without irrigation. The Commissioner concludes, after a careful examination of the whole matter, that the entries in question ought not to be cancelled, and he therefore unqualifiedly recommends a removal of their suspension. An appeal may

Poisonous Cheese.

Yesterday afternoon a man came into town with a load of cheese, which he disposed of in this city. Parties who partook of the cheese at the evening meal were, almost without exception, taken violently ill, some manifesting dangerous symptoms of poisoning. Physicians were engaged until a late hour last night in prescribing for the numerous cases. The physicians are silent thus far as to the nature of the poison—whether it is in the coloring matter used or in the milk of which the cheese was made. One thing is certain, there was poison in the cheese, as was abundantly proved by the number of the sick last evening. The man who sold the cheese may be blameless. Doubtless an investigation will make it clear whether he is or not.—*People's Cause*, Red Bluff, Cal.

The poisonous effects which follow the eating of certain lots of cheese are well established by occasional occurrence at the East, but during our residence in California we have not heard of it here before. The fact is the cause of this occasional poisonous quality in cheese is one of the mysteries of dairying. It rarely happens even where cheese is most freely used, but once in a while the manifestations appear to frighten a neighborhood. No one has yet demonstrated in what the poison consists. We examined several specimens of it while we lived in central New York, pursuing the subject both chemically and microscopically, but discovered nothing unusual in its composition. Sometimes fungoid growths are discovered, but, excepting some cases where lead has been found to have been incorporated in the adulterated coloring matter or from the use of painted utensils, the

problem of poisonous cheese, as it is known to dairy investigators, is as yet unsolved. If any of our readers have a sample of this cheese which has poisoned the people at Red Bluff we should like to make an examination of it.

COMPETING FOR THE SOUTH AUSTRALIAN REWARD.—As we have anticipated in earlier mention of the \$20,000 which the South Australian government offers for a successful combined grain reaper, thresher and sacker, the competition is drawing out California inventors. We learn from the *Stockton Independent* that W. H. Little, a San Joaquin farmer and inventor, is thinking seriously of building a new machine and taking it to Australia to contest for the prize. The only question of uncertainty at present with him is whether he will have time to build the machine and get it there before this season's crops are harvested. The harvest season of that country occurs some time from January to March.

THE eruption of Mount Vesuvius has recommenced with great activity.



A LEADING AMERICAN GOOSEBERRY—THE DOWNING

uable of all fruits, "since it can be grown in less space, in more unfavorable circumstances, and brought sooner into bearing than any other."

FIGURES ON THE RAISIN CROP.—A representative of the *San Francisco Journal of Commerce* while in Sacramento gathered the following estimates of the present raisin crop in this State: "If the weather keeps clear a few weeks longer the raisin crop will be the largest ever raised in the State. Deitz & Co., of Sacramento, give 100,000 boxes as the probable quantity, but more conservative estimates by M. T. Brewer & Co., of the same city, agree on 70,000 boxes, of which 20,000 boxes will be A No. 1, and about 30,000 fair quality. Blowers will make 4,500 boxes and Briggs about 10,000 boxes A No. 1. It will soon become unprofitable to import any but the very best Malaga raisins for this market." This is the end to be aimed at until even the "very best Malaga" will be of no account here.

THE artesian well, now 2,100 feet deep, on the Morris grant, Sacramento county, has not yet found flowing water.

be taken from this outrageous decision to Secretary Schurz, who, it is hardly probable to suppose, will sustain it. If he does, Congress should repeal such an infamous law, immediately on its assembling."

PAMPAS PLUMES.—We recently had the pleasure of a call from Joseph Sexton, of Goleta, Santa Barbara county, and he left us fine samples of the pampas plumes, in which he has built up quite a business with Eastern purchasers. The *Santa Barbara Press* says: "The business of shipping pampas plumes to the East is becoming quite a feature in this section. Their beauty delights our Eastern friends, and a ready market is found for them there. They are used in a variety of ways for ornamentation. It is stated that Mr. Joseph Sexton, of this city, sold 40,000 plumes this year in San Francisco and Eastern cities, principally Chicago, and that he realized the snug sum of \$4,000 for his novel venture."

THE German government intends to propose an import duty on grain.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

A Proposed Cure for Vine and Tree Lice.

EDITORS PRESS:—A public-spirited Frenchman, M. Apolis, of Montpellier, addresses "to the authorities of Contra Costa, at Contra Costa, Province of California, America," a partly written circular regarding an antidote to the ravages of the phylloxera, as well as other insect pests and maladies of fruit trees. He incloses another, directed to the authorities of Solano; both destined to be "communicated to the agriculturists." Presumably on the strength of the latter inscription, the document has come to my hands, after a vain search for the authorities aforesaid; and as the sender has gone to some trouble and expense in the way of postage, international courtesy would seem to require that it should go forth to those for whose benefit it was intended, which is likely to be best accomplished through "the columns of your widely circulated paper."

The substance of the circular is to recommend, for the purposes above-mentioned, the application to the roots of the diseased vines or fruit trees of a decoction prepared as follows: One pound of hop "leaves," half a pound of hollyhock flowers (*fleurs de mauve*), and one ounce of orange leaves; boil with 15 gallons of water, and before use dilute to 10 times its bulk—that is, to 150 gallons. Use about half a gallon to each vine, and a proportionately larger amount for trees; apply in October or November, and again in February. The roots should be partially uncovered.

The inventor also recommends the use of the same liquid on seeds before sowing, as a preventive of disease. He recommends for use on the large scale, the hop residues of brewers. He is very confident in his assertions concerning the efficacy of the remedial and preventive powers of this exceedingly gentle, not to say homoeopathic, dose; and as it is cheap and easily tried, we give him the benefit of the doubt, since he seems to be actuated by philanthropic motives alone in making his prescription public. That it has not proved altogether efficacious against the phylloxera, is unfortunately shown by events, the prescription having been communicated to the French Academy in July, 1875.

It is not stated whether the weights given refer to fresh or dried leaves; the presumption is that the latter are meant, and I should infer that the hop "leaves" are intended to mean, not the leaves proper, but "hops" as usually gathered.

E. W. HILGARD.
University of California, Nov. 2d.

Saving Beans from the Wet.

EDITORS PRESS:—Having grown beans by the 100 acres, I think that I can give you a better plan for saving them than that mentioned in your issue of October 26th. After I had lost a good many I adopted it, and you are aware that none of us know how to save until we have lost. Put in stakes about the size of Lima bean poles and about seven feet long over ground along one row. At the bottom of this stake, after inserting it in the ground deep enough to hold it, put some stones, old wood, or any such material, one foot high. On this put your beans by the handful of plants, shoving the roots through the stake to their branches (to make it plain) on the one side of the stake; then the next two handfuls on the other side, carrying it up as round as any apple as high as a man can reach, peeping downward as you build. Do not be afraid of their molding; the green leaves will soon wither. Your two last handfuls you place roots up against the stake and tie them with their own straw or piece of string. In this position no wind will throw them down or loose them. The rain will run through them like a sieve without doing them the least damage. Your stones or other material at the bottom will prevent the first layer from rotting or molding. When finished, your field looks like a field of cut corn in shocks. When dried you drive your wagon between the rows, having a close bottom, or sheet in the bottom to save the loose beans. One man takes hold of the top of the stake and another at the bottom end, and lift on to the wagon, and both by giving at the same time a pull to the stake, will free it from the beans. They can load them as you would a load of hay. After the first load they will be as proficient in it as the writer. We in the East leave ours out until we get a good frost on them; I mean in this shock state. They are then so much more easily threshed. If saved in this way they will not have a damaged bean, the great desideratum in bean saving and doing away with so much hand-picking. I should not have thought of giving you an article on so simple a thing had I not read the extract in your paper.

G. HOWATT.
Diamond Springs, El Dorado Co., Cal.

The Labor Question.

EDITORS PRESS:—Until there is some improvement in the white labor market, both in quantity and quality, the farmer at least has every excuse for employing Chinese. From nearly three years' close observation in Napa valley, I have arrived at this conclusion: That the expulsion of Chinese laborers would be in our agricultural districts, and more especially among fruit-growers, a most irreparable evil, and one the effects of which would be felt for many years. The restriction or limitation of immigration from China would be but a milder form of the same evil, and one that would result in the ruin of multitudes of fruit-growers, and, consequently, the spoliation by running to waste of hundreds of acres of orchards.

Let me give an instance that has just come under my notice. Two white men apply for work at a well-known ranch in Napa valley; they say they are hard up, and would work for almost nothing; but no advantage is taken of this, and they are sent to husk corn, with a chance of a longer job if they give satisfaction, at a dollar a day and board. After eight days one of them, a strong, healthy, young fellow, leaves at five minutes' notice. The other one conducts himself in such a manner, that his employers are obliged to discharge him after working 15 days. This is not, unfortunately, an exceptional case, as I could quote many others of a similar character, where men have been employed in wine-cellars, vineyards, hop-yards, etc., but have only been the source of great annoyance and vexation to those who hired them. A number of boys have been sent up here from San Francisco at various times for grape and hop-picking, but have behaved more like young savages than anything else, traversing the country at night, making raids on the neighbors' melon patches, etc. It is a case in which the innocent must necessarily suffer with the guilty, there being, doubtless, many conscientious, willing workers among these agricultural hoodlums. There are many who remember the days of old, "the days of gold," and instead of getting an honest living at a dollar a day, prefer to void their vituperative spleen in the choice language of the city slums.

If those who come to the farmer for employment would forsake their whisky bottles, live more frugally, be more industrious, that great mountain, the Chinese evil, will become a mole-hill, for what farmer would hire Chinamen if he could as advantageously to himself employ white labor?

LEONARD COATES.
Yountville, Oct. 28th, 1878.

Tulare County Fruits, Bees, Crops, and Railroad Lands.

EDITORS PRESS:—Our first storm of wind and rain, October 14th and 15th, which was quite general throughout California, and has been followed by the fearful storm along the Atlantic coast, did little good or harm throughout this part of San Joaquin valley. The rainfall, as measured by Daniel Spangler at a point near the south bank of King's river, and 5 miles north of Hanford, was 0.26 of an inch; at Borden, Fresno county, 8 miles north of the San Joaquin—where it makes its huge bend, from west to northwest, after leaving the mountains—it was 0.48 of an inch, as measured by E. S. Russell. A previous shower at Borden, Friday night, the 11th, was also quite general, and amounted to 0.06 of an inch, making 0.54 of an inch for the season. Fortunately, the threshing in all this region was finished, most of the dozen or more machines at work ending their jobs by October 5th, after a steady run since the middle or end of June.

One effect of the shower in this irrigated region, besides purifying and cooling the air, is that it has freshened such "volunteer" wheat and barley as sprang up soon after harvest in the moister parts of many well-irrigated fields. Imagine how odd it seems, so late as October 26th, to one accustomed for years to the dry, parched look of ranches without irrigation in California, to see such volunteer

Wheat and Barley Green and Well-Headed. At a height of 3 or 4 feet in fields that were reaped in July. Should any one be skeptical about making two crops of grain or grain-hay yearly on irrigated lands in California, he needs but to look at numerous fields here, where second crops were not wanted, and his skepticism would vanish at once. During the past week the

First Frost of the Season

Has left its mark on various vines, especially pumpkins and watermelons. By the way, there is perhaps no part of the State where watermelons do better than on these irrigated lands. Now, through the fields and along the ditches volunteer watermelons are found in large quantities. Even in regular patches they are so abundant that they are looked upon generally as common property, and it is considered "all right" if, in passing any one's patch, you take a few for your own use. This is proving to be a

Fine Fruit Region.

Up to this time the noted fruit orchards and vineyards around Visalia have furnished most of the ranches hereabouts with fruits and grapes, but this year many young orchards and

vineyards are beginning to bear abundantly. The Foster Bros., W. H. Docker, Jas. Simpson, Perry Mills, Wesley Underwood, E. Sanborn, and others near Lemoore and Grangeville, have very thriving young orchards of peaches, apples, plums and pears. Mr. E. Hill, one half-mile west of Lemoore, has quite a large vineyard of raisin grapes, Muscat and others, that can scarcely be surpassed in size and flavor by any in California. As an example of the growth of peach trees, I may mention that Mr. Docker's peach trees are four years old from the seed. The trunk of one of them measures over 18 inches around near the ground. Six of his best peaches weighed three pounds. One I measured was 9 inches around. Their flavor is very rich, and no peaches can be more juicy. In thinning out the peaches on some of his trees, he assures me he would sometimes, out of 30, leave only 3 with a space of some 4 inches between. Mr. Underwood and Mills mentioned above, have Languedoc almond trees that were full of nuts this year. The growth of cottonwood trees from posts here is worthy of notice. Out of a number now densely shading their comfortable home, the Foster Bros. have one about 9 years old that measures 66 inches around near the ground. Wm. Ingram has one that measures 61, and Judge Ilucy has some about the same age and size.

Bees.

With proper attention, do well here. On Jack Phillips' ranch, near lower King river, Mr. T. B. Cody has over 250 stands of them in charge of Mr. O. Field, who has an experience of 35 years in bee culture, including 31 years in Iowa before he came to California. From these hives between 700 and 800 pounds of honey were taken in two weeks, from August 1st to the 15th. This "Lake Honey" is justly noted for its clearness and fine flavor. The hives are robbed twice each season about the 1st of August and November. Mr. Field informs me that the favorite flower with his bees is a little modest white flower on a small spreading plant which proves to be a verbena, (*V. nodiflora*). It blooms here throughout the spring, summer and fall, its tiny flowers being arranged in whorles around a cone-like cylinder, the blooms developing at the bottom and extending towards the top as the season advances. Stock is also fond of this useful plant. Mr. Field also showed me the empty cell of a queen bee, which he says is the largest he ever found. It is $1\frac{1}{2}$ inches long, $\frac{1}{2}$ inch wide, diameter of aperture $\frac{1}{4}$ inch. Mr. Field showed me an improved beehive, invented by him and patented in 1860, which is the most complete of many that I have examined. It is a

Movable-Comb Hive.

Its leading feature is, two sets of pivoted sashes turning right and left from the same point. The *RURAL* may in future give a full description and wood-cut of this valuable invention, and we may hope for occasional letters from Mr. Field. His long and successful experience in bee culture will make them valuable. Mr. Phillips' ranch here referred to, is near that of Daniel Rhoads—or "Uncle Dan," as almost everybody in this country calls him. His is one of the oldest and best improved places in all this country. Having come to California as early as 1846, he located his present home some 18 years ago. Besides having a very productive ranch, irrigated by the Rhoads' ditch, already mentioned in your columns, he has beautified his home with willow, poplar, walnut and cypress trees. His house and yard are tasteful and comfortable. Near the front of his house is something I have seen nowhere else at a private residence in the State from Siskiyou to San Diego. It is

A Large Bird-Cage.

Octagonal in form, like a "summer-house" or arbor, some eight feet in diameter and ten feet high, formed of strong wooden uprights and roof and a network of wire. In it are confined several California mockingbirds, very similar to those of the Southern States, some Western "song-sparrows," caught, like the mockingbirds, in the densely wooded region of lower King's river, and the Java sparrow, snowy white. With fresh wild berries placed upon a central pole, abundance of other food, and material for nesting, they appear almost as contented as in their native woods, and certainly are more comfortable than caged birds usually are.

Reference to these birds reminds me that W. L. Morton, near Grangeville, has the only red bird, cardinal bird, or Virginia nightingale, that I have seen in California. He brought it from Kentucky last winter. He has, also, the common persimmon, hickory, and other trees from "old Kentucky," planted as an experiment. Mr. Morton's ranch affords a good example of the

Yield of Wheat

On the best ranches here. His wheat—Sonora, the favorite in all this region—threshed out an average of 33 bushels per acre on 160 acres and 36 per acre on a 40-acre piece. An average of 25 bushels wheat and 50 of barley is not unusual here.

Besides the "staff of life" and other prime necessities provided for all through the Mussel Slough country, it is well to mention that many farmers have been beautifying their homes by flower gardens and trees. Besides those already mentioned I may name Messrs. Wyruck, Chambers, Fowler, Sanborn, Railsback, Boyle, Robinson and Shore, near Grangeville.

I must request your readers to remember that the items given from this part of Tulare county are intended to illustrate, from actual facts, the good results of systematic and continued irriga-

tion on lands that are almost worthless without it. Of course, the crops and growth on many Farms in This Region Unfurnished With Water,

As yet, are just as poor as in any other unirrigated part of this valley. I could tell you of ranches, where less than 10 bushels per acre of grain have been threshed out this season. The good people living on such places have, like the mass of farmers in this valley without irrigation, had a hard struggle to furnish their families with the necessities of life, and have become almost hopelessly involved in debt. But why dwell on such facts with which we have become only too familiar in San Joaquin valley for years past? They only show that the water brought upon these lands by the toil of the settlers is what has made them so productive and profitable. Within the past week good land, not yet provided with ditches, has been offered here at private sale—not forced, and with government title at five dollars per acre. Any one able to buy it and to bear the expense of constructing side ditches to it, can, of course, make it a valuable place. This tract is only about five miles from Hanford. I mention it especially because it shows what rank injustice it is for the railroad company to grade the lands it claims here by a very questionable title at from \$7 to \$40 per acre, when they promised in the pamphlet published to induce settlers to occupy their lands, that "any improvements that a settler, or other person, may have on the land will not be taken into consideration, neither will the price of the land be increased in consequence of them," and that the price would usually be "that of unimproved land of the same quality in the immediate vicinity at the time of grading." Yet every one with three grains of common sense, knows that the ditches and their results are improvements on these lands which the settlers themselves have made and paid for, the improvements that have made this land so valuable.

J. W. A. W.

Oct. 26th, 1878.

The Southern California Horticultural Fair.

EDITORS PRESS:—The Horticultural fair and the District Agricultural fair, two distinct societies, and the Supreme court, all going on in the city of Los Angeles at one time, constituted an impressive and auspicious formal opening of the metropolitan career of the emporium of southern California. If anyone ever doubted the metropolitan destiny of Los Angeles, the arrival of that destiny will deliver him from the comfort or discomfort of the doubt according as the wish was on the side of the doubt or strove against it. Every nook and corner of central California is vitalized by San Francisco. Every nook and corner of southern California is vitalized by Los Angeles; greatly vitalized near by and appreciably in the remotest neighborhoods, and all to be more and more benefited as the city grows. As central California has willingly, or otherwise, pooled issues on San Francisco and has won, is winning and will continue to win grand cash as the result, let southern California profit by the example.

It might be great coin to each county to have a metropolitan city around the court-house, but this clearly cannot be. There is only one lion to a forest, one chief eagle to an eyrie, and one metropolitan city possible to geographically distinctive southern California. Southern Californians, whether countryman, villager or city-man, have the choice to pool local interests and have a metropolitan radiation of coin in their midst, or a metropolis, not in their midst, absorbing their coin and disbursing it to others than themselves.

If there was no chief city in southern California the preponderance of interest would fix upon the geographical center, or near it, as the site of the chief city. For centrality and other reasons all should be reconciled to Los Angeles as the metropolis of southern California. Among the other reasons it may be mentioned that the city of Los Angeles is already the center of five railways and the point of far the greatest accumulation of population and capital. With the commanding geographical position, the existing population, capital and railways of the city of Los Angeles of to-day, it may be a city of 50,000 inhabitants before a city at any other point in southern California can reasonably hope to reach the point Los Angeles has now attained.

The soil-tillers of southern California impatiently await the earliest possible development of a metropolitan city within their cheap, convenient and profitable reach. If any other point in southern California offers the relief of a great city at an earlier day than Los Angeles, let that point come to the fore and prove it. If such proof be wanting, then let not corner-lot influence in a dozen rival towns defer our deliverance by undue opposition in advocacy of localities with great possibilities, barring the start in favor of Los Angeles, but which possibilities are reduced to a minimum by the start in the race which the fates have secured to Los Angeles. Every locality in southern California will grow through the growth of Los Angeles. It is better to grow through Los Angeles than to grow not at all.

Thus much is premised to a proposed report

of our fair, because many of the most important sections of southern California were not represented at all, while other sections were very meagerly represented, and not one region beyond the immediate vicinity of the city was fully represented. It is suspected that there are two causes for this failure of representation, viz: An excusable jealousy and an inexcusable apathy. It will be shown, however, that this fair was a great success, notwithstanding the partial representation. A display was made sufficient to illustrate the wonderful capabilities of our climate and soil; sufficient to arouse an earnest inquiry as to what would have been the *ensemble* of a full representation; sufficient to arouse the still more earnest inquiry as to what display can be made in the future, when our region now in the first stage of development, shall have enjoyed the effects of experience and capital, proximately adequate to its full development. In my next letter particulars of the fair will be given.

JOHN H. SHIELDS.

Florence, Los Angeles County.

[We shall be pleased to hear of the fair. The question of sectional interest, as to where southern California shall have her metropolis, is not for us to decide. We admit the above, without a shade of disfavor towards any point which assumes metropolitan charms, for the purpose of making prominent fact that southern California should by right have her own metropolis, and our State is large enough for two or more for that matter. Build up; go forward; these are our words for the whole State.—EDITOR PRESS.]

HORTICULTURE.

Names of Diospyros Kaki.

EDITORS PRESS:—In the introduction of the Japanese persimmon it was discovered that there was much confusion and uncertainty as to the proper nomenclature of the different varieties; and, even when the true name was obtained, it was sometimes a word difficult to transfer properly into our language. Suitable names were therefore substituted in some cases for this uncertain and undesirable terms.

Owing to this want of uniformity in the Japanese names, those not familiar with the subject might infer that there is a larger number of choice varieties of persimmon than really exist. The following list comprises most of the leading Japanese varieties, and is chosen from descriptions and plates of about 50 different kinds.

1. *Gosho* (from "go," the Imperial, and "sho," palace), also called *Yamato* and *Kimerigaki*. This is medium to large in size, flat or turnip-shaped, of a peculiar deep red color, sometimes yellowish, and has a melting, rich flavor that is unsurpassed. It is extremely popular and called "king of the kaki." Improperly called "Goshio."

2. *Yemon*. The name is possibly from "ye," above or superior, and "mon," a contraction of "mono," a thing, signifying a superior variety. (In pronunciation the *U* is nearly silent, and has probably been dropped.) It is sometimes called "uemon." This is a very common and popular variety in the Yohohama market. It is brought there in tight casks from the surrounding country, and by being kept in this way for a short time develops a very fine flavor. It is sometimes designated as "tarugaki," from "taru," a tub. One of the casks was received from Japan last year, and although generally overripe many of them were in a fair state of preservation. This demonstrates that the fruit can be shipped without injury to any part of the country, as the best winter apples cannot be sent to Japan without serious loss. The fruit is shaped like a tomato, is of a yellow to reddish orange color, and large size. Some specimens, and especially when the trees are young, are seedless. The flesh is solid and it is not generally used for drying. Improperly called "Emong," "Emon," "Ahmong," "Among," and "Tarakaki."

3. *Hiyakume*. From "hiyaku," a hundred, and "mome," a measure of weight, signifying that its weight is three-fourths of a pound. It is round like an orange, light yellowish color, and large size. Ripens early. It is used to some extent for drying. Improperly called "Hacume" and "Hacome."

4. *Daidaimaru*. From daidai, a species of bitter orange and maru round, signifying orange-shaped. This is sometimes classed with the preceding which it most nearly resembles, but in western Japan there is a marked difference between the two. It is of a light yellow (sometimes slightly green) color, and of medium size. Grown largely in Kiusiu in western Japan. Improperly called Daidemawru.

5. *Yedoichi*. From Yedo and "ichi," first signifying Yedo's number one persimmon; slightly oblong, and sometimes round. Flesh soft; fine flavored; dark red with spots of black around the point. It is the same or very nearly the same as the Kurokuma, from kuro, black, and kuma, the edge or border, referring to the dark colored apex. Improperly called Edoichi, Edochi.

6. *Tanenashi*. From tane seed, and nashi, the negative indicating the seedless variety. This has but recently been known in eastern Japan. It is probably the same as found on

the island of Kiusiu and seen in the market of Nagasaki. It has not appeared for sale in the markets of Yedo or Yokohama. It is described as very large, oblong in shape with pointed apex, yellowish red with dark spots and of a fine flavor. From all accounts it would seem to be a valuable variety.

8. *Zenji* or *Zenjimaruru*. The derivation of this word is doubtful. It may have originated from zenji or sen, names of Japanese coins, and it would then signify that it is round or oblong like a piece of money (the word maru meaning round). This is the earliest variety and is very abundant in eastern Japan. It is of rather small size, slightly oblong or round; the color red with dark spots; flesh solid and very sweet. It is sometimes designated as kizarashi from ki, a tree, and sarashi, to expose to the sun, i. e., it ripens on the tree, in distinction from yuzarashi which is ripened by the use of hot water (yu). Kizarashi and kizawashi are incorrect as are Zingi, Zingimaru, Zengi, Denji or Dzendimaru.

9. *Hachiya*. From the name of a small village in the province of "Mino," where it originated. It is large, oblong, with pointed apex dark red with black lines about the point; flesh soft; season from later part of October to January. When dried it has a white coating of sugar that exudes from the fruit and resembles figs. It is grown chiefly in Koshu, about 100 miles north of Tokio. Improperly called "Hachiga," "Hatsiya," "Hachia" and "Haychuya."

10. *Minogaki*. From "Mino," a province in Central Japan and kaki (changed to kaki for the sake of euphony.) Pronounced me-no-gake, (a as in far.) Called also Minodzu from suru or tsukuru, to produce, meaning the product of "Mino."

This is similar in shape, size and quality to the *hachiya* and seems to have no essential difference. It is also very popular in the dried state.

11. *Mitsubachiya*. From "mitsu" honey, and *hachiya*; honey flavored *hachiya*. It is not so large as *hachiya*, more elongated and lighter colored. A very good variety.

12. *Tsuru*. From *tsuru*, a crane; called also "Tsurushi," and "Tsurunoko," each of which signify the son of a crane. This resembles the *Hachiya*, except that it is much smaller.

13. *Tsunomigari*. From "tsuno," a horn, and "inagari," bent, i. e., horn-shaped. The apex of this variety is usually curved, and hence its name. It is oblong, and yellowish red. This is spoken of highly, but I am not familiar with its merits.

The *Amagagaki*, from "amai," sweet, and "kaki" is a general name for those that are sweet and palatable. I have imported ten of the above varieties, and can furnish them to any who desire to try the merits of the same.

It is probable that some other valuable varieties may be found, as the cultivation of this fruit for the foreign demand is of but recent date. Until within a short time the best fruit was found only in certain localities, and good specimens of the kaki were not always plenty, even in Yokohama market. The last few years has shown a marked improvement in this as in all other fruits.

HENRY LOOMIS.

San Francisco, Cal.

The Salmon Berry.

EDITORS PRESS:—Your note concerning the salmon berry was duly received. I would say that its natural home is along the coast, extending say from Mendocino to Washington Territory. I believe I have never seen them beyond the influence of the ocean; and always flourishing best in a cool, damp, rich soil, and protected from the sun and cold winds by dense growths of timber. They are generally found on the borders of forests, but not extending more than 200 or 300 yards into the forest. They never extend into the prairie more than a few rods, and are always dwarfed, and seldom bear fruit in such open ground.

The bush or vine does not die down every year, as does the blackberry, etc. The first year's growth has spines, as the blackberry, but in time they shed off and the wood becomes smooth. They grow from 8 to 12 feet high, or rather long, as they fall over, one resting upon another.

They begin to bloom from the latter part of February, continue through March, and ripen their fruit from about the 1st of May until about the last of June. The fruit is large, as large or larger than the largest Lawton blackberry. They part from the stem like the raspberry, leaving the fruit hollow. The color is bright yellow, generally, though in some cases purple. The seeds are large, fruit sub-acid, with no particular flavor. There is no resemblance to the strawberry whatever. They are wholly unfit for culinary purposes, for when cooked they seem to be all seeds. They are passable with cream and sugar, as they are picked from the vines fresh. I do not believe they will flourish in our warm, dry climate, though I have never tried the experiment.

St. Helena, Cal.

JOHN MAVITY.

[Everything brought forward in the *RURAL* is open to discussion by readers, who speak for the general interest. Mr. Mavity we know has lived in the North, and is a gentleman of trustworthy character. If he is mistaken on the salmon berry, he will doubtless be taken up on it. We want the truth about the fruit and nothing else.—Eps. Press.]

THE DAIRY.

Alfalfa Fed by the Soiling System.

At the late meeting of the California Dairy-men's Society, the first paper read was written for the meeting by Hon. E. Nason, of San Benito county. Mr. Nason's essay was as follows: The world has long since conceded the fact that "he who causes two blades of grass to grow, where but one grew before, is a public benefactor;" then, surely, he who devises methods of feeding three dairy cows, where only two were fed before, feeds them more healthily, and keeps them in a higher sanitary condition, thereby giving better financial results, must have it set down to his credit that he has been, and is, a promoter of the great dairy interest of this broad State.

With this short preface, I ask your attention for a few brief moments to the consideration of the question of the economy of alfalfa as dairy feed, when fed by the soiling system. Of course, by this is always meant the cutting and feeding by hand. Here let me meet an objection that is the first raised against this feed and this system. It is charged that alfalfa taints the milk, and consequently the product, whether butter or cheese, must be poor in quality. I am more than glad to have this objection raised, for purity and cleanliness of milk is the very foundation of a superior article of dairy produce; and making the objection is a good proof of an inquiring mind, after the most correct and approved methods and means of reaching the highest results in dairy produce.

I claim that with this feed, and this system of feeding, the maximum of excellence in quality as well as economy is reached. Now for the objection number one, that it taints the milk. I am free and frank to admit that when cows are fed by the old way, being turned into a field of rank and sudden growth, (for under favorable conditions the growth is always rapid and sudden), the milk is for a few days offensive, but soon becomes sweet and pure. Coupled with this frank admission, I would ask the objector if the same difficulty does not meet him wherever and whenever an over-abundance of wild feed is found, and used in the old way. If he answers in the affirmative, as we think he must, if he answers intelligently and honestly, (and these are virtues that all dairymen ought to excel in), then the objection is really against the old system of feeding rather than the feed.

The second objection, is the labor of feeding. I am of the opinion that this is not weighty, for every dairy requires a certain force to run it successfully; and as there is much spare time between milkings for all the hands, save those who make the butter or cheese, and the outside help can do all the work of feeding. If we find, by carefully estimating cost, a small margin against our system, I am certain it will appear insignificant when set over against the diminished cost in feed; for I feel very certain that the statement, that three cows are fed where only two are fed by the common method, is far below what a good stand of alfalfa, with plenty of water, will do.

For the benefit of those who are curious to know the bottom facts about this plant of which so much has been written pro and con., and are desirous to know what a small patch of it will do, I hope it may not be deemed out of place in this paper to state briefly what was done last year on fifteen acres, and will show you the great value of it in a dry year—the time of all others that tries the dairyman's soul, and pocket, too. I will here state, that *five* acres of this number were sown in February of last year. Every gentleman present acquainted with this crop, knows that the first year the crop is light, as compared with succeeding years. Now for results.

Last spring found my little dairy of thirty cows in poor condition as to flesh.

I was short of feed and was compelled to get them through to winter as best I could. When the second week in March came, my six-acre field that was sown the year before was a right royal stand. I commenced cutting and feeding, and I am glad to say that this field, together with nine acres more, before alluded to, kept my little dairy and one span of horses in good condition until last winter. And more and better yet, the feed gained of the stock during the season, so that I cut and cured for hay about 18 tons for winter use, and the rainy season found the cows in good condition. To be still more definite, I will state that the first-named field was cut every six weeks, from the first, until cold weather came, late in the fall, when it ceased to grow.

Now a word as to time of cutting. I commence on a field as soon as it begins to blossom; let it wilt for a day. This was after many experiments with it in various ways; this I have found to give the best results in milk and also beef-producing qualities. And here let me deal the last blow to the objection of taint. During this period I was making butter, and sold in our local market, near enough so that if it had been faulty in any way I must have heard from it; but no such complaint came, the partial curing taking away the elements that produce the taint. I make use of the word taint to express all that is contained in the very offensive smell and taste that milk has when cows eat mustard. One more count in favor of this most excel-

lent plant. It is a little off the subject, nevertheless, it is worth knowing. When out in blossom it makes the best of bee pasturage, the honey produced from it being second only to the celebrated white sage.

If your patience will hold out, I will continue this somewhat tedious recital on through this season; I do this because it makes the test stronger, fairer and more complete; and, further, it ought in part, at least, to stop the caviling about the merits of this plant as feed for dairy stock.

The present year the number of cows thirty, two head of horses constantly, besides transient ones that we all feed more or less all of the time. I have three acres more seeded this year than last. The feed has gained on the stock, and will gain so there will be at least 30 tons of hay cut and cured for winter feed. Let no member of this Association, while listening to this, think that to accumulate this amount of winter feed the stock has been pinched or sparingly fed, that would be very poor economy, and has not been practiced.

In conclusion, allow me to urge on those present the importance of cultivating even a small plot of alfalfa for your own safety and convenience during the dry seasons which the experience of the past teaches, in language too plain to be misunderstood by us, that there is in the future the same hard and trying seasons to meet and overcome. A few acres beside a small stream, or that can be reached with a well, for water is the great desideratum, would be of very great value to some of you dairymen who are conducting business on a mammoth scale. I say great value for even one dry year.

As to results in quantity of product I am not now prepared to give any detailed statement as compared to other dairies; this would in fact be very difficult to do, for it involves the question of variation in quality of stock, and this you gentlemen know full well is very great and varied in the production of milk. But, from the experience I have now had, all things being equal, that alfalfa fed by the soiling system, I am satisfied will give a good result, both in quality and quantity as the old method of feeding; and as a guarantee for a gilt-edged product of like quality every day, the old system can bear no comparison, for the simple reason that the feed being the foundation of quality either good or bad. This method prevents the feeding of anything offensive or of a nature to taint the milk, consequently the product must be good always, provided the handling be correctly done.

And now, gentlemen, as the finger-board of this season's experience points unerringly and unmistakably to low prices in the future, the great lesson it teaches is, not to quit the business in disgust as many will do and rush headlong and blindly into something else, to meet similar results; but rather it should teach the wise and prudent dairymen to persevere in his noble calling; to seek out and use all the best methods for cheapening the cost of production, and at the same time aiming to produce an article that shall stand the most rigid test of any market whether domestic or foreign. And if you, on careful examination of this subject, shall find a word or a thought that will aid in bringing about these much to be desired results, my labors in bringing before the Association a paper so imperfect as this will not have been in vain.

There was some discussion following the reading of this paper some members remarking that Mr. Nason's location on the rich moist lands of San Felipe was especially adapted to success, with the system he had adopted, but that on the coast dairy lands, such good results could not be obtained.

BASKET WILLOW ON EMBANKMENTS.—Basket willows are warmly recommended by a German official for the planting of the slopes of railroad excavations and embankments, especially where the soil is loose. On one of the leading railroads of Prussia they have been tried and found to answer admirably. A perfect network is formed by the roots which binds the whole surface firmly, the thick green growth transforming the raw and ghastly gashes in the earth into a beautiful thicket; the men who take care of and watch the track can easily care for the willows, which grow readily in dry as well as wet soil, if it is a little loose, and where there is market for basket material the growth can be made profitable. There are hundreds of kinds of willows, but those recommended for this purpose are the *Salix viminalis*, the *Salix pruinosa*, but most of all the *Salix amygdalina* (*triandra*). In dry ground the cuttings should have a good length underground. They will then put out a multitude of roots in every direction and make up for the want of abundant moisture by the extent of the ground from which they draw. If there is any way to hide some of the horrible wounds which railroads have made on Nature's face, it is much to be hoped that it will be tried; and the advantage offered by the willow in preventing the washing of slopes, gives an economic as well as an esthetic reason for planting it.

STANDING ROOM FOR THE HUMAN RACE.—An Englishman with a hobby has discovered that there is room for all creation on the Isle of Wight. According to the most recent estimate the population of the earth is about 1,440,000,000. Two square feet of standing room being allotted to each individual, this number would cover 66,115 acres; and the area of the island is 93,341 acres.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Union Grange Meetings in San Bernardino County.

EDITORS PRESS:—There are three Granges in San Bernardino county. About a year ago it was suggested by some of the live members of Rincon Grange, that if we could get up a meeting of the three Granges once every three months, that probably it would revive the interest of the members in the Grange. The advantages set forth were that we would get better acquainted with one another, could discuss questions of importance to ourselves as farmers, and speak on Grange topics generally.

It was also suggested that we could probably arrange some co-operative plan by which we could all be benefited. The suggestion was well received by Rincon Grange, and the Secretary was instructed to correspond with San Bernardino and Riverside Granges. The two last named Granges favored the proposition, so the first meeting was held at San Bernardino, next at Riverside. Both were well attended, and the public was invited, as the meetings were to be open ones. Last Saturday was the time appointed for the meeting at Rincon. About 10 o'clock the people began to arrive at the district schoolhouse, where we hold our Grange meetings, and by 11 o'clock there was a full house. The meeting was called to order; Brother Abbott, of Riverside Grange, was elected President, while Brother Akiu, of Rincon Grange acted as Secretary.

First on the programme was reading the declaration of purposes of the National Grange, which was ably done by Sister Akin.

There followed an essay from Brother Hall, of Riverside Grange, on agricultural education. He urged upon the farmers the necessity of educating their children in the theory and science of agriculture; that the rudiments should be taught in the common schools; the University should send out lecturers, who should deliver a course of lectures in every school district, if possible. He urged upon the parents to subscribe for good agricultural papers, such as the RURAL PRESS, and read agricultural books, all of which was received with marked attention. Another essay was read by Brother Akin, of Rincon Grange, on the good of the Order. He set forth the benefits to be derived by the organization, by co-operation, and otherwise, so plainly that the audience could not fail to see the points.

Brother Slaughter, of Rincon Grange, made an address on agriculture. He briefly spoke of the condition of the various Indian tribes, drawing a contrast between those that were engaged in agricultural pursuits and those that lived on such things as frogs, rats and snakes. He gave his observations of the rise and progress of agriculture for the last 30 years, during which time he had been in this State.

After the speaking came the most desirable of all the proceedings—one of those feasts that our Sisters know so well how to fix up. After one hour of eating and talking, the meeting was again called to order, and Sister Hall, of Riverside Grange, read an essay on "Education and its Importance to the Agriculturist." The document was well written, but her fine voice being very low, it could not be distinctly heard. I am requested to send it to the Patron for publication, which I will do by next mail.

Next, and last, was a speech from your humble correspondent, on the benefits to be derived from the Grange organization. It was getting late, and the people were getting restless. Some few had already left. I saw by a glance at the crowd that if I could not interest them that there would not be many to listen to me long; so I commenced in earnest, to hold the audience if possible, by stating, that the first occupation ever followed by man was agriculture. I endeavored to prove that agriculture was the foundation upon which every other interest is built; without agriculture nothing could prosper. That the next general pursuit followed was war between tribes and nations. That after they ceased to some extent, the country became settled up thickly, while the common soldier went into agricultural pursuits. The leaders of the armies went into other pursuits. Being accustomed to organization, they still kept up an organization among themselves. They then turned their attention to the farmers, there being no enemy to prey upon. That they, through their organizations, were enabled to prey upon them until they had swindled them out of all their hard earnings, and the lands nearly all fell into their hands. That a few lords of the country owned all the lands and that the common farmers were mere tenants. That America was discovered; and settled by farmers. That as soon as the farmers in America got to living at their ease, and doing well, the aristocrats and landlords of England commenced oppressing them here. That armies were sent over to subjugate them. That the American farmers marshalled their forces together, and after eight years of war gained their liberty. That we formed a liberal government. That immigration commenced to pour in from all countries. That our population had swelled from 3,000,000 to 40,000,000. That according to the present increase of population, it would not be long until our country would be

as densely populated as Europe. That there were organized bands of aristocrats at work among us, and that the lands are fast falling into their hands. That in this State 60% of it has already gone from us.

I spoke of other evils, that the farmers had to contend with monopolies of all kinds. That in order to compete with other organizations, that were eating up our substance and rendering us poor, we must have an organization of our own, and that the Grange was that organization. I then told them of many things the Grange had done for the farmers, and many things that could be done yet, if we only would do it. All of which was listened to with marked attention.

The meeting then adjourned, to meet at San Bernardino the last Saturday in January, at 10 o'clock A. M. It seems to me in addition to these quarterly meetings, we could have an annual meeting of all the Granges of these three southern counties. The State Grange is always so far from us, and we all being poor we cannot attend its meetings. Our quarterly meetings I know have had a good effect in a good many ways. Many a trade has been made between members of the Order, by exchanging list of articles for sale by members. We might get up some kind of a co-operative business, that will be of mutual benefit to all. At any rate we could have a good social time and get acquainted with one another.

If we could get up such meetings, say sometime next May, just before harvest, we might arrange it so we would not have to sell our crops for a reduced price to get money to pay our debts, but hold on until we could do better. What do you Grangers think of it, speak at once, let us hear from you?

JOHN TAYLOR,
Master Rincon Grange.
Chino, San Bernardino County, Cal.

Co-operative Societies and the New Constitution.

An Appeal to the Constitutional Convention.

EDITORS PRESS:—Permit me, through your columns, and in behalf of many citizens of California, who favor co-operative societies in their truest and safest form, to call the attention of the Committee on Corporations of our Constitutional Convention, and all members of the Convention to the interests of such associations in the Constitution.

It is announced that among other sections agreed upon, by said Committee, is the following, to be known as Section 13:

"The Legislature shall provide by law that in all elections for directors or managers of incorporated companies, every stockholder shall have the right to vote in person or by proxy on the number of shares owned by him, for as many persons as there are managers or directors to be elected; or to cumulate said stock and give one candidate as many votes as the number of directors multiplied by the number of shares of his stock shall equal, or to distribute them on the same principle among as many candidates as he shall think fit; and such directors shall not be elected in any other way."

This section provides well enough for joint-stock companies in their usual form, as does our present Constitution. But without a similar enactment making lawful the organization of co-operative societies, like those on the noted Rochdale plan, of England, the cause of true co-operation in this State would be dead, so long as such a Constitutional enactment remains in force. For, it would always be declared from the wording of this section, that the restriction in votes, and in holding shares which form the special safeguards of truly co-operative societies would be unconstitutional, and any by-laws adopted to secure such restrictions would be null and void. This has been an insurmountable difficulty heretofore in all attempts by those who desire it in California, to organize such associations on the safest plan—a plan which at once protects well the interest of small shareholders, and checks a tendency to hurtful monopoly in some corporations.

Believing that a large majority of the members of a Convention from which much good work is expected, would not willingly stifle the interests of any useful class of citizens, nor totally disregard their reasonable wishes, I beg leave to submit to them with brief explanations, a clause that will secure the rights of all in this matter without interfering with the wishes of those who prefer joint-stock companies for their various purposes.

The chief distinctive feature of English co-operative societies—and they have become a great benefit to many of England's best citizens—are the following:

1st. Each member has but one vote, in his own right, no matter how many shares of stock he may hold.

2d. Each member is permitted to hold, under all circumstances, only a limited and small number of shares.

3d. All such societies are made limited; that is, every member is liable as regards the company or its creditors, only for the number and amount of shares taken by themselves.

These three principles, with similar safeguards, have given such societies great popularity and strength in England and wherever they have been carefully organized and managed, as many of your readers know.

We have been unable as yet to form any such associations in California in strict accord with

such valuable protective features, because of alleged constitutional difficulties.

Must these difficulties always remain? Or shall our new Constitution wisely foster such institutions, making lawful any future legislation that may be needed to organize and protect such associations, if any of our people wish to form them?

Earnestly hoping that a large majority of the delegates will be ready to answer the last question in the affirmative, I venture to suggest that the following or a similar clause be made to follow Section 13, as quote above, and that any other words may be inserted wherever needed to meet the object in view, viz: *Provided*, That it shall be lawful for citizens who so elect to form and register under State laws, co-operative societies, which may, at the option of their members, limit each member to one vote, and to the number of shares to be held; and the Legislature shall enact such laws as may be needed for their faithful management and protection, and may limit the liability of their members.

Hoping this or a similar enactment may meet the approval of a majority of our people and their delegates, and that co-operative associations will be provided for in the new constitution, I leave the matter with them.

J. W. A. W.

Hanford, October 30th.

Grange Information.

The following extracts are from the *California Patron*:

New Castle Grange, No. 241, Placer county; meeting Oct. 12th. Resolutions to the memory of Sister Martha Brown, were reported by the following committee: Mrs. J. Threlkel, Julia S. Rice and J. H. Mitchell, and adopted.

In answer to a question concerning the revival of dormant Granges, from Brother E. B. Higgins, of Saticoy Grange, Ventura county, W. M. Steele replies as follows: "The payment of back dues reinstates Granges that have become dormant from non-payment of dues. All members in good standing at the last regular meeting, can take part in the work of reviving a dormant Grange. A Grange can reinstate itself at any time, if its charter has not been surrendered or revoked. We are not unmindful of the difficulties that at times obstruct the efforts of faithful members of our Order, and we assure you the return of your Grange will receive a hearty fraternal greeting."

The San Francisco Grangers' Business Association, is now prepared to enter into contracts with farmers, for the delivery of grain bags, of standard quality, Calcutta manufacture, in April and May, 1879, at 9½ cents apiece. Farmers who have been compelled to pay 11, 12, 13 and 14 cents apiece for bags this year, have now an opportunity of contracting for them, when they are low.

The twelfth annual session of the National Grange will be held in Richmond, Virginia, on the third Wednesday in November, 1878. Worthy Master Steele and wife will leave here about the 12th or 14th, to be in attendance at the meeting of the National Grange.

SANTA ROSA GRANGE.—We had the pleasure of meeting with Santa Rosa Grange, October 25th. Worthy Master Adams, who appears highly esteemed by his Grange, was absent on a visit to the coast; Worthy Overseer W. H. Nash officiated as Master. Some very good remarks were offered by Bros. Nelson Carr, S. T. Coulter, Sister H. L. Carr, the acting Master, and others. We commend Bro. Nash's example, of calling in a neat manner upon individual members around the hall for at least a few remarks. The meeting was a lively and interesting one.

The Pomona Grange of Sonoma county, we learn, never misses an interesting occasion on the regular day of its meeting.

ANNUAL ELECTION OF OFFICERS.—The National Grange Constitution provides that the officers of subordinate Granges shall be elected "at the regular meeting in December." The form of the Constitution recommended by the State Grange of California, and adopted by many of its subordinate Granges, reads as follows: "Election of officers shall take place at the first regular meeting in December, and they shall be installed at the first regular meeting in January, or as soon thereafter as practicable." We request all Secretaries to send us a carefully written list of officers of their Granges as soon as elected, for publication.

In Memoriam.

CERES GRANGE, No. 64, October 25th, 1878. WHEREAS, The Almighty, in His infinite wisdom, has seen fit to remove from our midst our beloved Brother RICHARD WHITMORE, our Worthy Assistant Steward; and WHEREAS, He was indebted to us by many acts of kindness, brotherly love and sincere affection, and feeling deeply his loss, we offer this tribute of respect to his memory. Therefore be it

Resolved, That the sudden death of our deceased brother, filled our hearts with sorrow and regret.

Resolved, That in the death of Brother Whitmore the Grange has lost a worthy member, the community a most useful citizen, the poor a good friend, and his family an affectionate husband and father.

Resolved, That we tender to Sister Whitmore and family our sincere and heartfelt sympathy in their sad bereavement.

Resolved, That these resolutions be spread upon the minutes of this Grange, that a copy be given to the family of the deceased, and that copies be sent to the *Modesto Herald*, *Stanislaus News*, *California Patron* and *Rural Press* for publication.—[M. E. Kittelle, Mrs. H. W. Brouse, George Rich, Committee.

AGRICULTURAL NOTES.

California.

AMADOR.

EGG WITHIN EGG.—*Dispatch*, Nov. 2: Last Wednesday a curiosity was discovered at the store of Mr. B. Sanguinetti, in this place, in the existence of an egg within an egg. An ordinary-looking hen's egg was broken, and within it was found another small egg about the size of a Chile bean, with hard shell, and of a brown yellowish color.

COLUSA.

JOINT WORM.—*Sun*, Nov. 2: J. D. Rosenburger, of Antelope valley, informs us that he found the regular joint worm in his wheat this season—such as he used to see in the Shenandoah valley, in Virginia. He thinks that a good deal of the wheat was injured by this worm instead of by rust. There was rust in many fields, but some fields seemed to give out without any appearance of rust. There are more worms in everything than we have ever noticed before. One can hardly get any kind of green fruit that is not more or less wormy.

CONTRA COSTA.

CULTIVATION.—*Antioch Ledger*, Nov. 2: The "scratching in" process has been commenced on the New York ranch. In driving from Nortonville to Black Diamond recently, we noticed several cultivators at work in the fields. This land requires deep plowing and thorough pulverization, and it is quite time this early practice of substituting a harrow and cultivator for a plow should be discarded. No doubt there are adobe soils where shallow plowing is preferable, but experience has shown in a hundred instances that most of the land between Bay Point and Point of Timber requires thorough tillage to insure a crop, and the additional fact that with this land well worked, we can do with very little rain.

LASSEN.

LASSEN AND MODOC FAIR.—*Butte Record*: The Lassen and Modoc fair, held at Susanville last week, seems to have been a successful one. The weather was excellent, notwithstanding the lateness of the season.

SAN BERNARDINO.

WHERE CATTLE NEED NOT BE SALTED.—*Cor. Riverside Press*: In a late issue I see the inquiry made as to the reason why cattle and horses in this country refuse to eat salt. The reason is that their wants are supplied by eating different weeds and grasses. I suppose all have observed the minerals in the soils, especially in the valleys, which are commonly called alkalies, but these same alkalies are known to carry a small per cent. of salt, and all or most of the grasses that stock eat take up a portion of the above natural minerals. To prove the foregoing theory, I can cite the fact that while I was in the San Gabriel mountains last summer mining, my horses would eat a liberal share of salt every week, and it was noticeable there were no indications of salt in their range, but just as soon as they were fed a few days here in Riverside they would refuse their salt.

SAN DIEGO.

ABANDONING THE ALMOND.—*News*: We do not see or hear of much to encourage the cultivation of the almond. We believe it is destined to be an abandoned production. We hear of many who have dug up their trees, and only a few willing to work them. Here, in this county, the trouble is that they do not bear, and when they do bear, like cotton, the yield is too light to be profitable, and we have heard it said that only a few almonds on a tree would fully mature. It is a great misfortune to many people that they were ever planted, as they are an incumbrance to the ground, to say nothing of the cost of planting, and the loss of time in bringing them up to a bearing point, or the labor of removal. They are reported as doing a little better in Santa Barbara county.

SAN JOAQUIN.

UNUSUAL LIFE IN WHEAT GROWING.—*Herald*, Oct. 31: The agricultural outlook for the coming year may safely be said to be encouraging beyond precedent, viewed thus early before seeding time. The good done by the crop of wheat that has just been threshed is almost miraculous. Last year, on account, largely, of a succession of unfavorable years, a great many farmers were without the means of providing seed and feed necessary to put in a crop, and they fairly besieged men of means in this city to assist them, giving very favorable terms contingent upon getting any crop at all. This year this practice is all changed and these men all have means of their own with which to procure feed and seed, the prime requisites for extensive agricultural operations in California. The consequences are that nearly all the land available for wheat in the San Joaquin valley will be sown. A gentleman who is thoroughly informed upon the condition of things on the West Side, tells us that there is already not a single acre of land that can be rented for wheat in the region between Bantas and Hill's Ferry, but that is all engaged for the coming season. The farmers who last year were anxious to give great advantages, contingent upon getting a crop, are this year masters of the situation and only offer one-fourth of the crop to those who "furnish" them, whereas last year they frequently, if not generally, gave half. On this side of the river where land is valued higher, one-third of the crop is given as a consideration for being "furnished." This furnishing does not include labor or teams. The cash rent for land on the West

Side is from three to five dollars per acre. The acreage to wheat for the harvest of 1879 will be unprecedented in the San Joaquin valley, and when it is remembered that one half the usual amount of rainfall, according to experienced farmers, will insure an average crop, with other conditions ordinarily favorable, it may be reasonably stated that the agricultural prospect for the next season is very encouraging.

DIVIDING UP ESTATES.—*Herald*: We are informed that Ross C. Sargent has decided to divide his immense ranch, in the northwestern part of this county, into small farms which he will offer for sale at low rates on long time. This will be an opportunity for men with large families and small means to secure a home and lands which, well tilled and economically managed, will make them comfortably well off, not to say independent.

NORTON'S SINGLE PROPELLER PUMP.—*Independent*: There is on exhibition at the gun shop of Mr. W. H. Van Vlear, on El Dorado street, opposite H. C. Shaw's agricultural implement establishment, a new improvement for pumping water, and farmers and others seeking information in regard to best and most approved methods of raising water for irrigating or other purposes, might find it not only interesting but profitable to call at the place designated and inspect the invention. This pump has only one upright shaft with water-propelling flanges about a foot apart. The pipe in which these propellers elevate the water perpendicularly, is constructed of wood, and the bore is four inches in diameter. For the shaft, propelling or elevating flanges, pipe, etc., nothing particularly new is claimed by the gentlemen directly interested in this pump, the merit of the improvement consisting alone in the saving of power required to raise the water from a tank, river or well. The pipe in which the perpendicular shaft, to which the propellers are fastened, revolves, contains a zinc partition in the center dividing the space in the pipes into two equal parts, thus splitting the column of water and preventing the whirling motion of the stream that, without said partition, would inevitably be created by the rapid revolutions of the propellers. We have seen a model of the Norton pump in operation at Mr. Van Vlear's establishment, and we are convinced that the improvement is meritorious and will be generally so regarded.

SAN LUIS OBISPO.

ACCIDENTAL FIRE.—*EDITORS PRESS*:—The Steele Bros. Senega ranch dairy-house and fixtures were destroyed by fire yesterday at 11 P. M.; also 780 cheeses worth, in this market, near \$3,000. Teams and lumber with the requisite force of men were sent down immediately to replace the buildings, and the Underwriters of San Francisco informed by telegraph of the occurrence. Their policies of insurance will cover some portion of the losses. The community lose the privilege of eating some well-cured and rich "Herkimer cheese." It was my privilege last week to sample several times Senega cheese, and it was entirely too good for the flames.—C., Arroyo Grande, Oct. 26th.

SAN MATEO.

PLOW FACTORY AT HALF MOON BAY.—*Redwood Times*, Nov. 2: R. I. Knapp, of Spanish town, is entering upon the construction of his sidehill plows with increased facilities in the matter of machinery and tools. The plow made at his shop is an invention of his own on which he obtained a patent on the 7th of September, 1875. He made many improvements on the patterns existing before that time, among which are lightness with no loss of strength, while an attachment of his own invention enables the man holding the plow to reverse it without stopping the beam or letting go of the plow. The plow is a model among modern improved farm implements and works with perfect satisfaction. It weighs when fully equipped from 75 to 80 lbs, and yet is strong and durable. It is constantly growing in favor as use demonstrates its superiority, and the manufacturer has no difficulty in disposing of all he can make. He is now making a hundred and has an order to send a lot to a firm in San Francisco for shipment to Oregon.

SONOMA.

THE WINE INDUSTRY.—*Petaluma Argus*, Nov. 2: From good authority we are informed that the wines and brandy of the principal valleys, Santa Rosa and Sonoma, are sold for fair prices and demands for an amount far beyond their present capacity which cannot be supplied. When a citizen estimated, one year ago, that 1,000 tons of grapes were available within a radius of ten miles of Santa Rosa, the assertion was doubted and hogs were turned into vineyards, or grapes of all kind were sent to the city at \$8 per ton. This year the poorest grapes bring from \$12 to \$15 cash in this county, and improved varieties, from \$22 to \$30. Even neglected vineyards are stripped for the wineries and hundreds are selling grapes never before offering to sell.

THE MAD ITCH.—*Heldsburg Enterprise*, Oct. 31: Last week we mentioned the fact that J. W. Calhoun, who resides near this city, lost 10 head of cattle from eating green corn fodder which had first been masticated by hogs. This disease is termed "mad itch," and was treated at length in the *PACIFIC RURAL PRESS* of August 24th, 1878. The disease is nearly always fatal, and is caused by cattle eating the dry portions of corn stalks which had been chewed and spit out by hogs. The symptoms are unmistakable; the animal is greatly dis-

tressed and is in cold perspiration; it seems anxious to scratch its neck and head; the eyes become much inflamed and frequently one side of the head is greatly swollen; it coughs a little, frothing at the mouth and seems to be trying to chew an imaginary cud. Cases are almost invariably fatal. Post-mortem examination shows the lungs, gullet and first and second stomachs to be all right, except the first stomach, or rumen, is rather fuller and drier than common; the third stomach will be found completely packed with dry ruminated fodder—so dry that it is impossible to pass it off; this stomach is highly inflamed, also the muscles of the neck and head. J. G. Dow informs us that in early days a few cases of this fatal disease occurred among the cattle down the river, A. J. Gordon having lost two or three head of cows and he having lost one.

STANISLAUS.

PREPARING TO IRRIGATE.—*News*, Oct. 26: We understand that extensive preparations are being made to irrigate a large per cent. of the lands around Hill's Ferry, that are situated under the Miller & Lux ditch. The canal is now about completed to the Orestimba, a distance of some eight miles in this county. Hill's Ferry is now, at least in a degree, safe from the arid effects of drouths.

THOROUGH VS. POOR CULTIVATION.—*News*, Nov. 1: Our farmers are making extensive preparations for seeding a much larger area than heretofore. In fact if no outward circumstances should occur, we think it safe to estimate that the acreage will be increased nearly 20% in this county. Of course if the season is propitious the yield will be large. The soil of our plain and valley lands is still rich; the surface, or vegetable mold deposited years since from the delay of the wild grasses has not yet been exhausted. The summer of 1877, was almost a failure. Over hundreds of thousands of hastily, poorly cultivated acres of wheat, withered and scorched by the middle of April. The total average rainfall for that whole season, in this county, was but four inches. The drouth was the severest ever witnessed by the present inhabitants, yet here and there scattered fields upon our driest plain lands produced wheat that would be termed any year good crops. We need not enumerate those farmers now. Their names have before been given in these columns. It is sufficient to say, however, that in each instance, where a good crop was that year raised, the soil had been well cultivated, by first summer-fallowing and then cross plowing to considerable depth before sowing. In no one instance, certainly not near Modesto, where the soil was thus treated was there a single failure reported.

SUTTER.

ACTIVE WORK.—*Banner*, Nov. 2: A journey through Sutter county during the past couple of weeks, discloses the fact that our farmers are busy in preparations for the putting in of the next crop. A very dry year, followed by an unusually wet one, and fair average crops raised in both years, has demonstrated the fact that a paying crop in Sutter county, whatever the condition of the weather, is as reasonably sure as things can be in this life, and in consequence our ranchers make their preparations in good heart. The activity is not confined to one portion of the county, but it is noticeable all over it. Besides the life in the grain fields, those business pursuits dependent upon farming are also looking up.

VENTURA.

OIL AND CROPS.—*EDITORS PRESS*:—Captain Roberts, of the Los Angeles oil well, reports the work of reconstruction after the fire progressing finely and will have the drill going about the 5th or 6th, and looks for a large flow of oil soon. Beans are running over the estimate about one-fifth and corn is doing proportionately well. The sheller has the place of the thrasher and all farmers are feeling jubilant, and the hard times are easing up. All are looking for rain.—CONTRIBUTOR, Scenega.

YOLO.

SUPERVISORS ACTION CONCERNING GLANDERS.—*Mail*, Oct. 24: The following is the report of the action taken by the Board of Supervisors of Yolo county at their last meeting, WHEREAS, It has been reported to the Board of Supervisors of this county, that the disease known as the glanders has made its appearance in Yolo county; and whereas the said disease is conceded by all authorities to be highly contagious and exceedingly fatal; and whereas the said disease is not confined to horses, but may be contracted by human beings, as has recently been demonstrated beyond a doubt in the hospital of Santa Clara county, of this State; therefore be it *Resolved*, That in the opinion of this Board the disease known as glanders is a nuisance as defined by Section 3,479 of the Civil Code, and that it is the duty of each member of the Board to make diligent search and inquiry to ascertain to what extent such nuisance may exist within their respective districts, and to use all means in his power to abate the same. And that when any member of the Board has reason to suspect that any horse has the glanders he shall have such horse examined by some competent person or persons having a knowledge of the characteristic symptoms of the disease, and in the event that such person or persons pronounce such horse to have the glanders, then such member may, without the consent of the owner, see that said horse be at once killed and buried. Adopted by the Board of Supervisors this 16th day of October, 1878.

Science and Agriculture.

The following is an abstract of the leading points made by Mr. C. H. Dwinelle, in his address introducing a series of lectures on practical agriculture at the State University, to which we made allusion in the *RURAL* of October 26th:

We hear a great deal said nowadays about scientific farming, scientific stock breeding, and so forth. Any one hearing these expressions for the first time is apt to wonder how they differ from the same occupations carried on in the ordinary manner. Everybody knows what farming is. Many of our most successful professional and business men were born on farms, and have a very vivid recollection of the life they led there. But what has that to do with science? They do not see the connection.

There is a common idea that scientific knowledge is in some way very different from the kind of knowledge that we have use for in the affairs of every day life. The man who has had the simple education given in our common schools, knows that it is of value to him. He feels that he is on a higher level than he would have been without it; but of science he is very suspicious. It is usually associated in his mind with theory, and both of them are regarded as of very little use, in fact they are not practical.

To a man with a scientific education, this view of the matter is a mystery. He cannot entertain it for a moment, for he knows that it is science that has made our modern civilization what it is. The explanation seems to be, that science is confounded with the philosophy of the ancient Greeks, and those that lived before them. They based their arguments on grounds which they assumed to be true, in accordance with the eternal fitness of things. We know now that many of their supposed facts were false, and the demonstrations founded upon them valueless. But these old errors were exploded, and correct methods of investigation introduced by such great minds as Bacon, Newton and Galileo.

True science is simply knowledge based upon the experience of the past, methodically digested and arranged. Scientific agriculture, is agriculture carried on in accordance with a knowledge of the laws of nature. It is distinguished from empirical agriculture, or that which relies upon personal experience only; and traditional agriculture, or that which follows blindly "the traditions of the elders," in that its followers, by a careful study of nature's laws, and a searching analysis of methods pursued and results obtained by themselves and others, endeavor to understand the causes of their successes and failures. Other things being equal, as to natural capacity of body and mind, industry, experience, financial resources, etc., the scientific farmer certainly has many more chances for success than the plodding one who follows routine methods, without inquiring as to their reasons.

Scientific agriculture and "book-farming" have in many cases been brought into disrepute by the character of the men who have advocated them. There are many who set themselves up as lecturers and writers on this subject, who are utterly ignorant both of the natural sciences and the essential details of practical farming. They have perhaps read, in a superficial way, works of more or less value, and the usually weekly column in the general newspaper on the subject, and have spent a day occasionally with some friend on a farm. The want of practical value in the teachings of such men is usually very apparent to a genuine farmer. There are, also, men who have been successful in other lines of business, and who buy a farm as a sort of plaything, or as a health resort. Being told that the farmer should be a reading, progressive man, they buy an agricultural library. As they are not familiar with the matters treated of, they cannot always distinguish between truly scientific and practical writers and quacks; between rules that must be followed invariably, and those which can be applied only in certain cases. Of course such a man is about as likely to succeed as the one who attempts to work a mine by book. The result is almost inevitable loss, and a general distrust of book learning on the part of the victim and his friends and neighbors.

In neither case is the wholesale condemnation of books as an aid to practical business justified. Truly scientific books give us the accumulated wisdom of the human race, the results of countless experiments made at an inestimable cost of time and money. The mistake in these cases is in failing to place a correct estimate on the value and proper uses of general principles, isolated facts, personal experience and acquired skill. What is called "good judgment," results from a happy combination of all of these.

A knowledge of insects as well as larger animals is of the greatest importance to the farmer.

We are all familiar with the little green aphids that swarm on house plants, and in the garden attacks cabbages and cauliflower, and everything of the rose kind, including our common fruit trees. They suck the juice from leaves, dwarf their growth and make them offensive to the sight and touch. The lady-bird or lady-bug is also well known by many, but unfortunately confounded by others with the striped squash beetle and other injurious insects. The truth is that the lady-bird lives on the aphids and similar pests, leaving nothing but their empty skins. I have had a small rosebush that was badly infested with the aphids, cleared in a day by two or three lady-birds, and three plum trees have been so far protected by a lot of them as to bear

heavily this season, though the aphids threatened to ruin them in the spring. The commoner species of this friend of man are of an orange color with or without black spots on the wing-covers. They should be encouraged in every way. Sometimes they are found collected together in considerable numbers, and should then be secured and brought into the garden or orchard. [It should be remarked, however, that caution is necessary, for there are small beetles which among farmers share the name "lady-bird" which feed upon vegetation and injure crops. The lesson would be that observation and study should be invoked to aid in the distinction between insect friends and foes.—Eds. *PRESS*.]

There is little doubt that the indiscriminate killing of hawks and wild cats has had much to do with the increase of ground squirrels. It is not very difficult to protect poultry from hawks, but the squirrels are almost as hard to manage as locusts.

An interest in scientific study is a source of continual intellectual growth, and a protection against those vices which arise from idleness.

The highest type of a farmer should be a man of first-class ability, thoroughly educated in the natural sciences, and with such a knowledge of methods as will enable him to make researches of value himself. He should also be skillful in the details of farm work and quick to see chances for improvement and pecuniary gain. This is a high standard, but we hope that all the young men who leave the University of California to take the field will come as near to it as possible. Never admit that the calling of a farmer is not as high as the highest. He feeds the world, and if he will but make a study of his business, in all of its bearings, it will give employment to all of his faculties.

News in Brief.

GREECE's new ministers have resigned.

THE short-time movement is spreading in Lancashire mills.

THE strike of the Baltimore oyster-shuckers is injuring the trade.

HAYES congratulates King Alfonso on his escape from assassination.

It is stated that France is becoming the diplomatic champion of Greece.

THIS year's yield of honey in San Diego county, may go over 1,000,000 pounds.

MOROCCO is passing through the triple ordeal of cholera, small-pox and malignant fevers.

RAILWAY companies in English cotton districts are discharging hands and reducing wages.

UNLIMITED issues of paper money in Japan are beginning to worry all who wish that country well.

THE German government proposes to increase the duty on wine, hides, grain and some other articles.

THE Portuguese have granted 30,000 acres of uncultivated land in Mozambique for trying opium culture.

It is asserted that Afghanistan is required to reply to England's ultimatum by Nov. 20th, or the British forces will invade.

A YOUNG wood-chopper living near Auburn, Placer county, has been arrested for counterfeiting the legal tender silver dollar.

WM. D. CAMPBELL and John Spurgeon are suing the Spring Valley M. and I. Co. of Cherokee, Butte county, for \$20,000 damages sustained by the plaintiffs through tailings being run upon their growing grain.

AGRICULTURAL laborers in Kent and Sussex, have struck because of reduced wages and threaten to emigrate to the Colonies.

JOSEPH U. CRAWFORD, an experienced railroad engineer, has received an important appointment from the Japanese government.

ABOUT six per cent. of the looms and spindles in the Lancashire and Cheshire cotton districts, England, have stopped or are working on short time.

ON Oct. 31st, the German-American National Bank, Washington, suspended, leading to the closing of the German-American Savings Bank. The latter is pronounced sound.

A SPECIAL Board consisting of merchants, manufacturers, financiers and others, will probably be established in Germany, to advise the government in mercantile matters.

A LIEUTENANT-GENERAL of the Mexican army has been found guilty of violating neutrality laws in pursuing a band of revolutionists into the territory of the United States.

THE capital of the Oldham cotton mills is £4,600,000, more than half of which is borrowed. For the last year only about one-quarter of this has returned any interest.

BOULDER county, Colorado, farmers will try to stop the importation of dairy produce from Kansas. They should, for it is said that their own land can yield what is wanted in that line.

BLACK wolves are making havoc among stock on the Platte, on the Panec and Forks of the Crow. Bad as a grasshopper plague a Colorado paper says, and calls for a bounty on wolf scalps.

It is estimated that the balance sheet of the Paris exposition will show a deficit of 11,300,000 francs. This will be far more than made up by the increase in revenues resulting from the fair.

A CONVENTION has been ratified between the United States and all the nations of Europe, except Great Britain, together with most of the South American Republics, providing for the establishment and maintenance at Paris of an International Bureau of Weights and Measures.



Indirection.

Fair are the flowers and the children, but their subtle suggestion is fairer;
Rare is the rose-burst of dawn, but the secret that clasps it is rarer;
Sweet the exultance of song, but the strain that precedes it is sweeter;
And never was poem yet writ, but the meaning out-mastered the meter.

Never a daisy that grows, but a mystery guideth the growing;
Never a river that flows, but a majesty seepeth the flowing;
Never a Shakespeare that soared, but a stronger than he did unfold him;
Nor ever a prophet foretells, but a mightier seer hath foretold him.

Back of the canvas that throbs, the painter is hinted and hidden;
Into the statue that breathes, the soul of the sculptor is bidden;
Under the joy that is felt lie the infinite issues of feeling;
Crowning the glory revealed is the glory that crowns the revealing.

Great are the symbols of being, but that which is symbolized is greater,
Vast the create and beheld, but vaster the inward creator;
Back of the sound broods the silence, back of the gift stands the giving,
Back of the hand that receives thrill the sensitive nerves of receiving.

Space is as nothing to spirit, the deed is outdone by the doing;
The heart of the wooer is warm, but warmer the heart of the wooing;
And up from the pits where these shiver, and up from the heights where those shine,
Twin voices and shadows swim starward, and the essence of life is divine.

—Richard Realf, in *Atlantic Monthly*.

Hints for Household Practice.

Dr. Mary Safford has in the *Herald of Health* a lecture to rural housewives, which may interest our readers. We make the following extracts:

The farmers' wife in too many instances is prematurely old. If she has no help, with the ever-pressing cares of home and family, she finds very little time for rest and relaxation from care. But if she only knew how to do it she could command more leisure, and add to, rather than detract from, the comfort of herself and those dependent upon her.

In the first place, with all of the fresh and abundant vegetables that should be found in every farmer's garden, with fresh, sweet butter and plenty of milk, the whole household can feast upon excellent and nourishing food during the summer, without using much meat. Monday—washday—there must be a fire certainly most of the forenoon; then is the time, if fresh meat is at hand, to make a delicious and nourishing soup, a good meal of itself. The meat cut in small bits, or, if a bone, bruised, is put on, on the back of the stove, when the fire is first kindled, to cook slowly; the grease is all removed, the vegetables—if it be a vegetable soup—cut fine, are put in early, not too many to make it too thick, but enough, with some rice, to give it consistency. While this has been going on, a rice pudding has been put in the oven, just enough rice with milk, sugar and raisins, if one has them on hand, which requires no previous cooking, and no stirring, and is ready in due time for the 12 o'clock dinner. If there are berries, and a pie is preferred, put them into a pudding dish, with no crust beneath to be made soggy and indigestible, but with an over-covering of such material as light biscuits are made, and thus save time and trouble of kneading and rolling, of placing and cutting the abominable compound called pie-crust. Why make a pie at all? Why not eat the berries? Because pie is traditional and much enjoyed by the farmer and his help, and a few berries used in this way will go much further than when eaten uncooked. Now, while the washing is going on, the soup making, the pudding baking, the skillful housewife will have her eye outreaching to the needs of supper. In another kettle she will have put a tin-covered dish, with the amount of oatmeal or cracked wheat needed for tea; she will have learned just what proportion of water is needed, and never have to give a thought to its cooking, except to see that enough water is kept in the kettle. It will be done about the time all else is, and will no doubt prove a very acceptable dessert to the man of the house and his help, certainly with cream and sugar. But if it is destined for tea, it is put into something that will give it a shapely appearance when put upon the table. If there is any sweet corn or beans left over from dinner they can be prepared so as to make a most palatable succotash for tea, and so it can always be with the economical housewife.

Tuesday there will be a hot fire for ironing, unless the farmer's wife has the advantage of a kerosene stove, which she certainly needs. Then if the butcher supplies a roast, is the time to cook it; the larger it is the more juicy and rare it may be baked, so why not get enough so as to have it cold for Wednesday's dinner, and on Thursday from the remnants make a meat

pie, with a nice light biscuit dough crust. Then there are the bones, that would help to make a good soup for Friday. If one feels the necessity for meat, and something of this kind could be done, it would save a vast amount of the heat and fumes that comes from the frying of pork, besides giving better food, with less liability to deranged stomachs and livers.

The prudently inclined farmer's wife, with a husband ready to second her efforts, can dispense with the use of tea, not only to the pecuniary benefit of the family, but to its health-promoting, and substitute in its place a wholesome and most agreeable warm drink, in the shape of rye, barley, or wheat coffee, burned or ground by herself.

A most superficial glance at the home and the surroundings of the farmer tells the story of the thrift or the thriftlessness that prevails within and without. If the farmer's wife lacks order, if she doesn't have a place for everything, and put everything in its place, then you will always find her behindhand with all of her work, and wondering how it is that Mrs. S., with quite as much to do, never seems hurried, nor flurried; and that the washing and ironing, baking and cleaning are done when they should be.

The farmer's wife wastes vitality, and is perpetually hindered in her work by her long skirts. There is no reason why she should not, like the farmer, be dressed suited to her work. Up stairs, down cellar, in and out, she should wear a dress so short—say six to eight inches from the ground—that she can carry baby up stairs, or milk down stairs without skirt entanglements. Let her but try it once and she will never depart from the freedom it secures. The farmer's wife should never lose in her dress and personal appearance the charm of neatness; a clean calico, a fresh collar, a tidy apron, and orderly kept hair she may always have.

Teasing Children.

Teasing goes on at home often to a lamentable extent, and more than the temper has been permanently soured by the process. The parents tease the children, and the children tease each other, till the passionate are made furious, the meek tearful, the humble craven, the sensitive callous, and the quiet morose. If one child has a certain ungainly habit—consequent, perhaps, on a physical defect—as the peering of short sight, or the limp of lameness; if it is absent or dreamy or clumsy, those who are given to the bad habit of teasing never let it alone. No callow cygnet was ever more cruelly pecked at by the full fledged ducks than is the poor ugly duckling of the nursery, and unless that cruel play is stopped by the authorities the mischief of a life is wrought. Nothing, indeed, in a house demands more careful overlooking and more vigorous and judicious suppressing than this habit of teasing indulged in by the members of a family one with the other; for the sport of the one is here again emphatically death to the other; and when you have broken the finer nature that lies in every soul, how will you mend it? But—it does not answer to be too sensitive and to make a martyrdom out of a little harmless play that means to do no one any hurt. The only way in which to meet those who make teasing in a manner a profession is with perfect good humor and serenity. To be cross or tearful is to lay yourself open to worse assaults; for the teaser only wants to know which place is most vulnerable, and where he can best wound you. Give him his vantage ground, and he will use it to your discomfiture, mask your weak places and he is powerless.—*Springfield Republican*.

Marriage Customs in India.

Marriage customs and marriage mantras says the *Jewish Times*, differ in some respects in different parts of the country. Thus, at a marriage of His Highness, the Maharajah of Mysore, the following pretty recitation formed a portion of the ritual uttered by the bridegroom in musical Sanskrit:

"Who gave her?
To whom did he give her?
Love gave her!
To love he gave her!
Love was the giver.
Love was the taker.
Love! may this be thine.
With Love may I enjoy her!
Love has pervaded the ocean.
With Love I accept her!
Love! may this be thine."

Soon after this the bride and bridegroom proceed one or two steps forward, and the bride is thus addressed by the bridegroom:

"May the regions of space, may air, the sun and fire dispel that anxiety which thou feelst in thy mind, and turn thy heart to me. Be gentle in thy aspect and loyal to thy husband, be fortunate in cattle, amiable in thy mind, and beautiful in thy person; mother of valiant sons; be fond of delights; be cheerful and bring prosperity to our bipeds and quadrupeds. Soma first received thee, the son next obtained thee; the region of fire was thy third husband, and now a human being is thy fourth. Soma gave her to the sun; the sun gave her to the region of fire; fire gave her to me. With her he has given me wealth and male offspring. May she, most conspicuous cause of prosperity, never desert me."

These and many others which were recited, contain much exquisite poetry in them. They are, to quote Max Muller, the simplest child-like papers on record.

Farmers' Wives.

In his address at the recent opening of the Colorado Agricultural College, Mr. J. C. Shattuck made the following allusions: Statistics tell us that the farmhouse sends more women to the insane asylum than any other walk in life. Surely this will not be true of the generation that shall look back to this college as its *alma mater*. Your alumni will be wise enough to build comfortable homes rather than buy an additional quarter section; they will be able to make slight repairs upon house or wagon without consulting a carpenter, the wheelwright or the blacksmith; their doors will be hung, their windows glazed and their gates can be latched; their business calendar will contain no such day as to-morrow; they will know how to do the work in field and kitchen within reasonable hours, and in the cool of the evening they will sit in the shaded porch—husband, wife and children—and give an hour to mental culture and social chat, or with united voices, intone that immortal prayer with Burns—

"That He who stills the raven's clamorous nest,
And decks the lily fair in flowing pride,
Would, in the way His wisdom sees the best,
For them and for their little ones provide;
But chiefly in their hearts with grace divine preside."

They will know that sleep "doeth good like a medicine," and will not invite disease and sour temper by habitually driving every body out of bed two hours before day. Bob Ingersoll says that a man who routs his wife and children out of bed at three or four o'clock in the morning ought to be visited by a missionary. The eloquent Colonel is more humane than I am, or else our ideas of missionaries differ; I would send such a man to the whipping-post.

But the farmer of the future is not so. He will know how to make farm life pleasant and home happy. Ob! priceless wisdom. No sons shall be eager to shake the dust of his fields from off their feet as they haste to the city in the early days of their majority, carrying with them only memories of thankless toil. No daughters shall long for the time when they shall be freed from his tyrannical rule, and pray heaven to give them husbands who will deal more tenderly with them than father has done with mother; no wife shall be carried from his home to the asylum or to an untimely grave—driven hence by slavish toil or carking care.

FUNERAL OF AN ELEPHANT.—A curious ceremony has recently taken place at Siam, on the occasion of the death of the eldest of the white elephants, one of the idols of the Siamese. He was born in 1770, and died in his temple at Bangkok. A whole people bow down before this famous Albino, divining it is the emblem of the kingdom of Siam. The most beautiful presents are given to these animals, because, influenced by a belief in metempsychosis, the Indians believe, even as the present day, that so majestic an animal cannot but be animated by the spirit of a god or an emperor. Every white elephant possesses its own palace, gold dishes, and harness studded with precious stones. Several mandarins are appointed to wait upon it, and they feed it with cakes and sugar-canes. The King of Siam is the only person before whom it bends its knees, and the monarch returns this salutation. Magnificent obsequies were prepared for the defunct idol. Some hundreds of Buddhist priests officiated at the funeral ceremony. The three surviving white elephants, preceded by trumpeters and followed by an immense concourse of people, accompanied the funeral car to the banks of the Meenam, whither the King and the great dignitaries of the State had come to receive the mortal remains. They were then transported to the other side of the river and there buried. A procession of 30 vessels, decked with flags, formed a part of this curious ceremony. All the floating houses, which are ranged in a double line on the Meenam, numbering upwards of 60,000, were ornamented with flags of all colors.—*Galipani Messenger*.

THE PARADISE OF BABIES.—Japanese children are described by travelers as the happiest and best tempered in the world. An English lady residing there attributes this to the following causes: 1. The style of clothing is loose and comfortable. 2. The children spend much time in the open air. 3. There is little furniture in the houses, and hence children are but little restrained in their in-door sports. 4. The floors are covered with a thick soft matting, which constitutes both the carpet and bed, and upon this the children can play with comfort. There is a broad lintel over the outside door, upon which children clamber and play with safety and to their great delight. 5. The Japanese disposition is tender and affectionate; children are much favored by adults, and not scolded or capriciously thwarted in their sports.

QUALITIES OF A GENTLEMAN.—Mr. Thackeray, who is credited by one as being "the gentlest of critics, tenderest of satirists, sharpest of cynics, hardest of moralists, just as the mood takes him," has the following on the qualities of a gentleman: "What is it to be a gentleman? Is it to have lofty aims, to lead a pure life, to keep your honor virgin, to have the esteem of your fellow-citizens, and the love of your fire-side, to bear good fortune meekly, to suffer evil with constancy, and through evil or good to maintain truth always? Show me the happy man whose life exhibits these qualities, and him we will salute as a gentleman, whatever his rank may be; show me the prince, who possesses them, and he may be sure of our love and loyalty."

Bertie's Sunday Frock.

He was walking up Macomb street, peering in on the Italians, glancing into open windows at junk-buyers, and now and then entering alleys to inspect rickety old vehicles standing in front of barns.

"What am I looking for?" he answered the policeman; "well, it may strike you as foolish, but I've been searching around for a whole month, and I may have to keep it up for another. I'm looking for a rag-buyer. I'd know his rig if I should see it again, but I haven't the least idea where he lives or when I'll find him."

"Did he steal something from you?"

"N—no," was the hesitating reply.

"Want him arrested for anything?"

"N—no."

The officer was wondering what the cause could be when the man said:

"I feel a bit ashamed to tell you, but perhaps you won't laugh at me. You see I have old clothes on, and I don't look as if I had any cash to spare. I'm only a poor laboring man, renting a cottage up by the reservoir, and though I've only the old woman with me it's often that we barely have enough to eat. When there's plenty of work one of us is sure to fall sick, and when we are in health the world goes dead against us. It is a sort of life and death struggle with us, and sometimes we sit in the darkness and wish we were dead and buried 'long-side of our little Bertie, up in the poor folks' share of Elmwood. That little grave up there is all that keeps us here—we cling to life that we may keep flowers growing there. I've stood on the wharf many a time and felt like going to death at one jump, but that grave rose up to warn me back. On my way home at night I've feared, time after time, to find the house deserted or a corpse on the floor; but that little grave has restrained my wife the same as me."

"How old was she?" asked the officer, his own heart aching a little.

"Th—three years old," replied the man, "and she was the only child ever coming to bless us. We had luck enough before she died. I had work day in and day out; my wife was singing the whole day long, and when I started for home at night the knowledge that Bertie would be watching for me through the bars of the gate picked my feet up faster than anything ever has since."

"Well?" queried the officer, as the man paused.

"Well, she took sick and died. I don't want to tell you more than that, or I'll be breaking right down here in the street, and people will wonder if I've been drinking. It was three years ago she died, but her voice rings in my ears this hour the same as if I had left her at home. It's the same with the wife, sir—a dozen times a day she runs to the door, thinking she heard Bertie's voice; and I never go in that she doesn't look at me with reproach for not having our dear darling on my arm."

"I've lost children," sighed the officer, as he turned his head away.

"Then you know how the wife treasured up the little dresses and stockings and bats and things. We put all those things away after the funeral, and though it almost broke our hearts to set the bundle down and look it over, we somehow had to do it every Sunday; and there wasn't a thing which hadn't been tear-wet before the first year was gone. Those relics have been our riches. We wouldn't exchange them for the wealth of any man you can name. One day about a month ago a rag-buyer came along. You may think it funny, but even the poorest of the poor sometimes have rags to sell. Wife made up a bundle that day—enough to get a tin cup, or something of the kind—and in some way or other Bertie's frock—our dead child's Sunday frock—got mixed up with the rags and papers and was sold and carried off. My wife has done nothing but weep and lament since that day, and I've looked here and there and everywhere in hopes to find [the rag-man and get the precious relic back. It may seem a little thing to you, sir, but to us—we remember the first time she wore it; how proud she was; how we took her walking; how much she looked like a rich man's child. That dress had more tear-stains than all the other relics, and though I haven't \$50 worth of furniture in the house, I'd give every stick of it and go into the street to find Bertie's Sunday frock. I don't expect to get it now. It has probably been shipped to the paper mill ere this, and we have lost it forever."

"I'm sorry," said the policeman.

"And when I go home to-night," whispered the man, "wife will be standing at the gate, watching and hoping; and as far as she can see me she'll tell by my face that the search has not availed. I had rather lose a finger than meet her white face and reproachful look. I wish we were both dead!"

And with weary step and hopeless heart he dragged along, having such a mission as neither hope nor despair nor love brings to one in ten thousand.—*Detroit Free Press*.

ANCIENT RECORDS.—Mr. Magnusson has returned from Sweden and Finland, says the *Athenaeum*, with a harvest of Runic Calendars. He has brought back photographs of 265 Runic staves, and books on wood and bone and horn, abounding in a variety of types as to the form of the runes and the mark-days' emblems, and no less various as to the terms by which the year commences.

Chaff.

MEAT has never been as high as when the cow jumped over the moon.

A WAG suggests that a suitable opening for many choirs should be, "Lord have mercy on us, miserable singers."

LOVER (in French): "Angelina, je t'adore!" New England girl (who hasn't studied parley voo): "Shut it yourself; you left it open."

"Go my son, and shut the shutter,"—
This I heard a mother utter;
"Shutter's shut," the boy did mutter,
"I can't shut it any shutter."

THE Chicago *Journal* knows a thing or two. It says: "When a man imagines he is a prophet and a philosopher, he takes to long hair and a dirty overcoat."

RICH parvenu, who knows nothing of painting, to an artist: "How shall I hang this picture?" Artist: "I wouldn't hang it if I were you, but commute its sentence to solitary imprisonment for life."

An old Irish soldier, who prided himself upon his bravery, said he had fought in the battle of Bull Run. When asked if he retreated and made good his escape as others did on that famous occasion, he replied: "Be jabbers, those that didn't run are there yet!"

A PHILOSOPHIC Benedict says: "To be nagged at and blown up by a beautiful being of your own, who loves you all the while like apple-pie, and whom you love like plum pudding, is, to my idea, the happiest privilege of matrimony."

A SCHOOLMASTER tells the following story: "I was teaching in a quiet country village. The second morning of my session I had leisure to survey my surroundings, and among the scanty furniture I espied a three-legged stool. 'Is this the dunce-block?' I asked a little girl of five. The dark eyes sparkled, the curls nodded assent and the lips rippled out, 'I suppose so; the teacher always sits on it.' The stool was unoccupied that term."

A COUPLE were married in Georgia by a justice of the peace. Unto the man he said: "Sir, will you have the beloved woman you hold by the right hand, in the name of the State of Georgia, Cobb county, and the new Constitution, whether it be adopted or not, to be your lawful and wedded wife?" And to the woman he said: "Madam, will you take this man to be your lawful husband under the Constitution of the United States and the Constitution of the State of Georgia, no matter who is present."

"WHEN I travel by rail," said an eminent divine on the Victoria platform, the other day, "I select a first-class carriage in the middle of the train, I enter the middle compartment of that carriage, and I take the middle seat in that compartment—*In medio tutissimus ibis*—and I leave the rest to Providence." "It strikes me he leaves precious little to Providence," said an eminent descendant of Mr. Toodles, sotto voce, who happened to be standing by.

A FACETIOUS brakeman on the Central Pacific railroad cried out, as the train was about entering a tunnel: "This tunnel is one mile long and the train will be four minutes passing through it." The train dashed into daylight again in four seconds, and the scene in the car was one for a painter. Seven young ladies were closely pressed by fourteen masculine arms, fourteen pairs of lips were glued together and two dozen inverted whisky flasks flashed in the air.

THE MECHANICAL CHESSPLAYER.—Mr. Gumpel's figure, Mephisto, of which we took a description from *Iron*, about five months ago, is now to be seen at the Westminster aquarium. His inaugural sitting was attended by a number of prominent players. Mephisto is unaltered in appearance, but is clad in a new and gorgeous dress. An important improvement, however, has been made in the board and men, which now approach nearly the ordinary Staunton pattern. No pressure is now required on the squares involved in the moves, but they may be made quite silently, and are fully observed by the unseen manipulator of the mechanism. This adds much both to the interest of a game and to the difficulty of penetrating the inventor's secret. The ingenuity of the contrivance is not only beyond question, but deserving of the highest praise. Its usefulness may possibly be doubted, but Mr. Gumpel, says *Iron*, is certainly entitled to the credit of having produced the most intellectual-looking machine we know of.

RESTORING PROSPERITY.—At the county fair of St. Lawrence county, New York, held at Canton recently, Vice-President Wheeler, who resides in that place, delivered the annual address. When speaking of the condition of the country and of the methods of restoring prosperity, he said: "The fact, hard as it is, remains, that we can never regain our old-time prosperity without a return to the old paths. We must have soberer views of life. We cannot regain this prosperity until after the stronger portion of our people become willing, through patience and manly toil in the useful and productive arts of life, to earn every dollar they receive. Our young men must learn that they cannot, with impunity, ignore the lower rounds of the ladders on which their fathers climbed with patient, toiling steps, and come to property and reputation with a bound. In manly occupation and manly independence only can be laid the foundation of honorable, permanent prosperity."

ENGLISH TRIBUTE TO AMERICAN INVENTIVE GENIUS.—*Punch* says that a Yankee baby will crawl out of his cradle, take a survey of it, invent an improvement, and apply for a patent before he is six months old.

Young Folks' Column.

A Story for Boys.

Doubtless some of our California boys will like to read a story of maple sugar making in New England. Thus they may learn what were the sports of some of their fathers when they were boys in the frozen East. One of the fathers tells the following story of "a sugar-boiling scrape." Father used to let us go to the woods with the men when we were quite little shavers, and we would bring dry brush for the fire, and watch the big kettle when the sap was boiling, so as to call the men or throw in a piece of pork, or some cold sap, to keep it from boiling over. I can almost smell the sweet steam now, and see the little pieces of pork bobbing around in the kettle, and remembered how my eyes watered when the smoke blew in them, and how good the first taste of the sugar was when they began to cool it on the snow to see if it was done.

But the "sugaring off" was the greatest fun. When the sap was boiled down into clear, sweet syrup, they would put four or five pailfuls in the kettle, and cook it slowly and carefully till it was done enough to "cake" into sugar. And then we would wax some on snow, and stir some in saucers until it cooled, and eat it warm and cold until we couldn't hold any more, and a long while after father wondered how we could eat so much.

Well, one time, when we were about 12 or 14 years old, we thought the sugar would taste a great deal sweeter if we could get it in some sly and mischievous way. That's the way with foolish boys and men in other things. Stolen sweets make half the trouble in the world. And so we went around to half-a-dozen of the neighbors' boys, asking them to a sugar bee in our woods the next night, but telling them not to let anybody know it. We knew there was a churn full and two big jugs of syrup to be sugared off down in our bush, and we thought we'd steal a march on the men, and show 'em a trick or two. So after the chores were done, we asked mother if we could go and see the boys, and she said yes, if we would be back by nine o'clock.

We saw the boys, but it was in the lane leading to the woods, where they were waiting, whilst as mice. It was growing dark fast, and we cut for the woods as fast as we could go. There was a big bed of coals, snugly covered with ashes, and we soon had it raked out, put new wood on, and made a blazing fire. Then we all took hold of the long pole, and swung the big kettle over it. How to get the syrup in was the next question, as we couldn't lift the big jugs up. But I found the dipper, and we dipped it out of the churn used to store it in, until there was a pailful or more in the kettle, and it began to boil up, as yellow and sweet as could be.

By this time the woods were dark as a pocket. The fire lighted up the woods for a little ways, but it seemed all the blacker in the shadows beyond. We had never been out before, and the strange stillness began to make us feel very queerly. Our shadows, thrown by the firelight across the little clearing, looked like big, black giants, and there wasn't much fun in our laughs as we watched them. One of the littlest boys vowed he saw a man hiding behind a tree, and another thought he heard some animal stepping in the brush a little way off. You see we knew we weren't doing right, and that makes boys—and men too—very uneasy.

But we kept close to the fire, and talked as bravely as we could, until the boy who was stirring the sugar, said: "It hairs! it must be done. Who'll try it?"

"Who! Who!" said a loud voice out in the darkness of the woods.

Every boy started up as if a panther had come upon us. Jim dropped his stirring stick in the fire. Harry tipped over the pans of snow on the bench. Charley stumbled over a root and fell head first into a sap bucket; and then we all held our breaths and hearkened.

"Who! Who!" said the voice again, loud and solemn.

"Who are you, your own self?" shouted Frank, the boldest boy in the party—"and what-r-ye doing in this sugar-bush, this time of night?"

No answer came.

"Let's smoke him out," said Frank, grabbing a blazing stick from the fire, and starting for brush, using it as a torch. He hadn't gone many yards before a great white owl flew from its perch in a tree, calling "Who-who-o-o-o! To-whit-to-who!"

And then we all laughed at our scare, and turned to our sugar just as a dreadful smoke and smell began to come out of the kettle. While we had been "owling it" the sugar had burned.

We had just got the kettle swung off from the fire when another voice sounded close behind us, and this time it wasn't an owl, but father himself, who had seen the light of the fire, and come down to find out what it all meant.

"So, so," he said, "very industrious boys, I see!—like to work nights! Well, we can't have anything wasted. You can just go at that beautiful sugar you have made, and eat it up." And he was a man that meant business, and no fooling when he spoke.

GOOD HEALTH.

Does Running Water Purify Itself?

This subject is discussed in the November *Popular Science Monthly* by J. A. Judson. He takes a decided negative, as will be seen by the following paragraph: It is not impossible to point out authorities on sanitary matters so wedded to pet theories that they unhesitatingly deny that the conversion of a pure running stream, or even a large river, into a conduit for the sewage-effect of a great city, will have any deleterious effect on the potable quality of the water taken a few miles below the filth-entering point. It has been demonstrated that this is not only false in theory but also in fact. It was Dr. Letheby, of the English "Royal Commission on the Water-Supply of London," it is believed, who was the first to announce what has since been proved a fallacy, viz., that "if sewage be mixed with twenty times its volume of river-water, the organic matter which it contains will be oxidized and completely disappear while the river is flowing a dozen miles or so;" and further, that "it is safe to drink sewage-contaminated water after filtration." The "Royal Rivers Pollution Commission" of 1868, unwilling that this expression of opinion should remain untested, submitted it to careful and ingenious experimental investigation. The result is thus announced: "It is thus evident that so far from sewage mixed with twenty times its volume of water being oxidized during a flow of ten or twelve miles, scarcely two-thirds of it would be so destroyed in a flow of one hundred and sixty-eight, at the rate of one mile per hour, or after the lapse of a week." And, after mentioning certain details in support of this, the commissioners conclude with the remark that "it will be safe to infer, however, from the above results, that there is no river in the United Kingdom long enough to effect the destruction of sewage by oxidation." Dr. Frankland, an eminent English authority, before the Royal Commission on Water-Supply, gives some strong testimony in support of the statement that it is impossible to remove the sewage-contamination from water by any known process, natural or artificial, so as to render it harmless, except by boiling for a long time, or by distillation; and, as these two processes are impracticable on a large scale, then, he says, in his opinion, "Water that has once been contaminated by sewage ought not afterward to be used for domestic purposes; and, inasmuch as it is generally believed that the noxious matter of sewage exists there in the form of minute germs, which are probably smaller than blood-globules, I do not believe that even filtration through a stratum of chalk could be relied upon to free the water perfectly from such germs."

BEST ARTIFICIAL LIGHT FOR THE EYES.—Dr. M. L. Holbrook writes: The following are the most essential conditions of a good artificial light: It should be steady, and neither very dull or very intense. Flickering lights are always injurious. The Argand burner is the best. If a shade is used it should guard the eye from the direct rays, while permitting a fair amount of light in the room. The eye should not be kept in darkness by too much shading. A lightly tinted paper is better than pure white for reading or writing. Yellow glasses have been found superior to others in some cases of weak eyes. In reading, the light should if possible come from behind the person, and the eyes should be allowed to rest a little every few minutes, even when they do not seem to require it.

DANGER OF A PHOSPHORUS BURN.—The *Medical Times and Gazette* tells of a young man, who, while traveling from Paris to Lyons, lit a match by scratching it with his thumb-nail, and a piece of the incandescent phosphorus penetrated under the nail and made a slight burn, to which he paid no attention. But after an hour the pain became intense, the thumb swelled, then the hand, and next the fore-arm. He was obliged to alight at a station on the journey, and send for a medical man, who declared that instant amputation of the arm was necessary. The patient insisted on postponing the operation for a few hours, until the arrival of his father, for whom he had telegraphed. Before the latter, however, could reach his son, it was too late; the poisonous matter had gained the arm, then the shoulder, and any operation became impossible. He died in great agony 27 hours after the burn.

A RARE DISEASE.—From the *Medical and Surgical Reporter* we learn that a case of a very rare affection—the ossification of the muscles of the trunk and limbs—was presented by Dr. Nicoladoni, before the Vienna Medical Society, in the person of a girl of seven years of age. In this case, the disease was far advanced, having commenced with the muscles of the neck, whence it extended to the spine, the anterior part of the thorax, and the limbs. A number of the muscles were completely ossified. It is stated that there are only three such cases on record.

NOSEBLEED.—The best remedy for bleeding at the nose, as given by Dr. Gleason in one of his lectures, is in the vigorous motion of the jaws, as in the act of mastication. In the case of a child a wad of paper should be placed in its mouth, and the child should be instructed to chew it hard. It is the motion of the jaws that stop the flow of blood.

DOMESTIC ECONOMY.

Sugar-Cured Hams.

EDITORS PRESS:—Will you please inform me how to make sugar-cured hams, and oblige a subscriber?—F. D. HOLLADAY, Spadra, Los Angeles Co.

The following is one recipe. If any reader knows a better, let us have it: Take six gallons of water, nine pounds of salt, three pounds of sugar, one gallon molasses, three ounces saltpeter and one ounce of saleratus. Mix these ingredients, and heat to a boiling point, skimming off all the impurities. When cold, pour it on the meat. Do not rate the amount of materials according to the amount of meat, but mix in the proportion given, and use enough of the mixture to cover the meat. This method cures the hams, and leaves them tender and juicy. They never get hard. Leave the hams in the pickle from four to six weeks, according to their size. It takes longer to cure large hams than it does small ones. Always move the hams after they have been in the pickle three days. Take them out and pack them over. This is necessary, for when they are closely packed together some parts of the hams do not have a chance to be penetrated by the pickle.

Potato Salad.

EDITORS PRESS:—A nice dish for supper or lunch can be prepared with very little trouble or expense, from cold boiled potatoes, especially in the country where cream is plentiful. Pare and slice thin, six or eight potatoes, two raw onions, and mix with about a pint of sour cream and two tablespoonfuls vinegar then season with salt and pepper to taste and you have an excellent dish for variety out of very plain material and you will find it to be liked well by most every one who tries it. E. C. M.

Sand Cut, Cal.

Chocolate Creams.

EDITORS PRESS:—The following is an excellent recipe for chocolate creams: 2 cups sugar (scant), 1 cup water, 2 teaspoonfuls corn starch. Boil the mixture 9 minutes; then pour into a dish and stir until cool enough to mold into little balls, with the hands. Melt $\frac{1}{2}$ lb bitter chocolate (Baker's) in a dish over the teakettle. Dip the cream balls into the melted chocolate and place on buttered paper to cool.

READER OF THE PRESS.

El Cajon, Cal.

WASHING WINDOWS.—Some one advises on this subject that it is not an easy thing to wash windows so that they will look clear and well polished, and if soapsuds are used, it is quite impossible to do it. The old-fashioned way of taking out all the windows, and washing them in soapsuds, and setting them aside to dry, after the suds have been rinsed off, is, to be sure, the easiest way of cleaning them, but it is also the worst way to make them look clear and bright. First brush them off well with a sponge or brush that comes for the purpose, and then wrap a bit of cloth about a sharp-pointed stick, and wipe out the dust that adheres to the corners, then take some weak tea, boiling hot, and add to it a tablespoonful of alcohol and a few drops of aqua ammonia or a bit of carbonate of ammonia, the size of an English walnut. Dip a piece of sponge or old flannel, or of old cotton flannel, into it, and rub the glass one way only until it shines clear. Wipe it off with another cloth, rubbing it until well polished. Newspapers used to be much better than any cotton cloth for washing and wiping windows and mirrors, but now that the paper is chiefly composed of wood pulp, they are the worst things that can be used, as they cover them with a linty substance.

ALMOND CUSTARDS.—One pint of milk; half a pint of cream; one ounce and a half of sweet almonds; five yolks and two whites of eggs, and four ounces of white sugar. Boil the milk and cream with a small stick of cinnamon; pour into a basin, and when cool take out cinnamon; set the milk on a slow fire, adding the sugar, the eggs, well beaten, and the almonds, blanched and chopped fine; stir on the fire till thick, but do not allow it to boil, pour it into a jug or bowl stirring it frequently till cold, and serve it in custard glasses.

BAKED EGGS.—Take a common white dish with a smooth bottom, and large enough to hold the eggs you wish to cook; do not crowd them. Set the dish into the oven till quite hot, then butter it; have the eggs broken, and slip them carefully into the dish; sprinkle a little salt over them, and put directly into a quick oven and bake three or five minutes. Butter and pepper may be added, if desired, when they are cooked. A tablespoonful of cream to two eggs, when they are first set to bake, is nice.

ORANGE CAKE.—Two cups sugar; yolk of five eggs and white of four; half a cup of water; two cups of flour; one teaspoonful of baking powder, juice and grated rind of one orange. Spread and bake on tin pie-plates. This quantity should cover six plates. Make a jelly by beating the white of one egg to a froth, and adding to it three-quarters of a pound of powdered sugar, and the grated rind and juice of another orange. Spread the jelly on the cakes and lay one above another in three tiers.



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W. B. EWER.

O. H. STRONG

SAN FRANCISCO:

Saturday, November 9, 1878.

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The Week.

The days have continued clear for the most part, despite the prophecies of storms to follow the persistent norther. The only exception has been a slight dash of rain around the bay and in the northern counties on Monday. At night, beneath the broad-faced moon, the frosts have deposited their silvery plating upon the lower lying regions, and vulnerable vegetation has paid its tribute to the advancing winter. During the open weather agricultural operations are advancing everywhere, and from all parts our readers write of determined, hopeful activity in all lines of farm production. In the great grain-growing counties new areas are being conquered and made ready for early sowing. The wine industry has taken to itself new life, and emptied cellars induce the wine-makers to be more liberal in their prices to grape producers. Raisin curing has been pushed successfully in localities here and there, from the upper Sacramento country southward to San Bernardino, and from Sonoma to the Sierra foothills.

Although money is not an over-abundant commodity in the rural districts, still the situation is in marked contrast to that of a year ago. The returns from this year's crops have enabled farmers to discharge many obligations, and though this process has not left large balances of cash, it has restored credit and changed distrust to cheerful anticipation.

A Dish of Molasses.

Hon. Leland Stanford, President of the Central Pacific railroad, has addressed to the public a letter concerning the regulation and control of corporations by State enactments. This letter may be found in full in the *Morning Call* of November 3d. Its length precludes our republication of it, and in the comments which we shall make upon its positions, we shall endeavor in no way to misinterpret or to falsely represent its spirit. Taking the letter as a whole it flows along as smoothly and gently, we might almost say as noiselessly, as the nectar from the grocer's tap, and the argument is so specious that the unwary might be caught like flies in its sweet and limpid flow. The more one looks into it, however, the more its true fragrance shoots forth; as the man found out when he peeled the onion.

The letter begins with a point on government, proclaiming that our Government is not, like those of most other countries, paternal and patriarchal and exercising supervision and control over the individual. It argues farther, that corporations are but hodies of individuals joined for high and useful purposes, and then it concludes that corporate property is always the property of individuals, and "a wrong, therefore, done to an association of men under a corporate title, or to their property, is a wrong to each individual owner, as much so as though they held the property as common partners or as joint tenants." Now, this figuring of the standing of a corporation which is acknowledged to have succeeded only by the munificence of the Government down to the level of a business which has arisen alone by the contribution of individual capital, it seems to us quite ungrateful, if it should not be characterized by harsher terms. It is not many years since the parental quality of our Government was otherwise regarded by these railroad gentlemen. When the subsidies of leagues of land and bushels of bonds were urged, if we remember correctly, the glorious parental duties of our Government were the themes of all speakers and writers in favor of them. Now the theory of government has changed somewhat and there is so little "parental" left that the old man has no right to spank his corporate children when they exhibit too great greediness for the sugar plums which belong to the rest of the family. One from reading the Governor's letter and having no other knowledge of the subject, would infer that these "individuals" who blessed the country by forming their corporation, had fished up the railroad from the depths of their own pockets and that they are being abused by a Government which was so unparental that it could not help them and yet now insists upon controlling their enterprise. This might be rather rough, we acknowledge, if it were true, but the joke of the thing is that it is not true.

The Governor makes a point on civilization in which he is doubtless sincere, but mistaken, if his words fitly express his meaning. He writes: "Civilization is measured by the accumulation of comforts, the elegancies, the luxuries and the splendors of life, and by the intelligence of the people. It is these that cause an increased demand for labor, etc." This might be called the truth run to seed. It may be granted that civilization is measured by the accumulation of comforts, elegancies (when these refer to matters of taste and culture) and by the intelligence of the people—but the "luxuries and the splendors of life" have always shown themselves the foes of civilization, because their demoralizing tendencies have soon made havoc of morals and economies and have so corrupted the people that civilization has relapsed into degradation and barbarism. This has been the experience of the old republics of history, and this danger, where individuals become over-rich and embark in "luxuries and splendors," will always be the menace of our own safety. Luxuries and splendors are the children of extravagance; and all political economists agree that prodigality and lavish expenditure for individual gratification, although it seems to give employment to a great amount of labor for the time being, is in reality a waste, and, like all wastes, is demoralizing in its tendency and a curse to a people rather than a blessing. The Governor evidently wrote his paragraph on civilization too hastily.

The Governor alludes feelingly to the hardship of the attacks upon corporations in these words: Corporations have one great disadvantage in

the fact that they often represent large property. This provokes the antagonism of envy and greed, and the corporation is usually left by its stockholders for its defense to the few officers that manage its affairs. A corporation representing twenty millions of capital will have only its officers to defend it in case of attack; but twenty millions of property, scattered, as it is, generally, in the hands of individuals, has for its defense the many who own, and thousands of others who own kindred property and have kindred interests. We see this particularly illustrated in the case of railroads, especially in California.

Every piece of eloquence should have its dash of pathos, and the above is the part of the Governor's letter which will soak the handana of the tender-hearted reader. It is, indeed, sad to picture those few officers deserted by the mass of stockholders, tearfully stepping up to the ballot-box at the annual meetings and sadly re-electing themselves to perpetual servitude, while outsiders, full of greed and envy, prepare new attacks upon them. There are some things too sad for words. This picture is evidently one of them, and we turn from it with brimming eyes. But who is it that deserts these devoted officers? This is the stickiest corner of the whole dish. The stockholders; and who are the stockholders? The greatest amount of stock usually determines the holding of offices in such corporations. Can it be that the stockholders desert themselves, cast themselves, as it were, in the maelstrom of persecution. The picture is not only sad—it is bewildering.

The Governor makes detailed allusions to the cost and profit in running railways. He knows more about that subject than we do, and we are content to imbibe wisdom from his writing. And yet these things which "no feller can find out" are always coming up to harass faith and wake the slumber of confidence. If railroading is such wretchedly poor business, how can such fortunes be made out of it? How can men rise in a few years from moderate circumstances to stupendous wealth? It must be that this poverty-stricken railroad thistle is made to produce figs in some way, but just how it is done is passing strange to the average comprehension.

Governor Stanford's letter contains other points, which it is hard to reconcile with the facts as they appear to a lay reader, but we have no space to allude to them. We can commend the document to all as a piece of very skillful special pleading; very sweet, very smooth, and yet so thin that the spoon chinks against the crockery at nearly every dip into it.

The Agricultural Use of the Imagination.

Doubtless the first thought of the casual reader will be that agriculture has suffered by the exercise of the faculty of imagination. Most of us can remember cases in which some of our agricultural friends have been seized with some frenzy to do something new; some uncontrollable impulse to embark in some brilliant scheme of production, or, in minor matters, have rushed out of the accepted rules of practice in pursuit of a method which has flashed upon the mind, and which has seemed to them at the time as a scintillation of agricultural genius. Nine-tenths of these magnificent schemes have failed; nine-tenths of these sudden departures from accepted practice have proved ruinous. Therefore, the disposition is to pronounce them "purely imaginative," and to condemn all use of the imagination in agriculture.

We propose to consider briefly the true position of imagination in agriculture. The position of imagination in mental processes is defined by authorities in this way: "Imagination is the guiding power of art as reason is of science. Between reason (or science) and art (or imagination) lies a vast range of the application of skill to the arts, by which plural we understand something more practical and useful than art in its higher forms. As no work of the imagination can be successful as to the end in view without an outline of reason, so no rational investigation and no sciences appeal to human sympathy unless they be inspired with that spirit of originality which is akin to imagination." Here, then, we see how it is that the term imagination falls into disrepute on our first thought of it. In literature the writer who is so loyal to imagination that he forsakes the guidance of reason, produces for our contemplation ghastly ghouls and the like, which do not excite a gleam of sympathy in right minds, because these creations are false to all our feelings and experiences; on the other hand, the

writer who gives us experience or reason all aglow with the fire of imagination, stirs our inmost souls with noble thoughts—gives us "a touch of nature which makes all the world akin."

It is not otherwise with imagination and reason in the affairs of life which are called "practical." The man who builds an enterprise or founds a proposed practice upon imagination alone, and makes plausible fancies his only guide, becomes numbered at last among industrial failures and does harm rather than good, because, frightened by his failure, cautious men are led to repress whatever outbursts of originality they may have, and to become the suspicious enemies of progress, instead of its zealous promoters.

Imagination in agriculture, what has it not done! Every time ideas, derived through observation and memory, have been varied and combined into new forms and relations, imagination has been at work. And by this process all our agricultural advancement has been attained. Every wise effort for the attainment of increased results in production, and increased rewards therefor, where the effort has been undertaken in harmony with the teachings of experience and the discoveries of the scientific investigator, embodies in it the element of originality, which is the outgrowth from a rightly guided imagination. In invention, the power which takes the materials afforded by experience and science, and weaves them into new and effective relations, is imagination. In all the industries, wherever practice is seen to be going forward to new successes, impelled by the levers of improved mechanism, materials and processes, the power which works these levers is imagination applied by the hand of reason.

There is no progress in life or life's work without ideals. No life is worth living which is not an unceasing effort toward a higher plane of thought or action, and this involves the conception of an ideal life. No work of life is anything more than drudgery, unless it is animated by a spirit of development and improvement, and this too calls for an ideal of perfection in its line. There can be no ideal conceived without the exercise of imagination.

The progress of agriculture shows clearly that it has been guided throughout by the pursuit of ideals. All improvement of farm animals has thus been secured. In the breeding of beef cattle, the ideal has been an animal in which bone shall be the minimum and flesh the maximum. Thus, in the thoroughbred Shorthorn or Hereford brought to its show condition, we see every bone hidden by a mound of flesh, every corner rounded off with layers of nutritious material. In the animal bred for milk there is another ideal, with capacious barrel for digesting, full veins for conducting the resulting blood to an enlarged udder, in which milk is made and stored in almost fabulous quantities.

The same method of improvement has characterized the progress of the vegetable tools of the agriculturist. All our improved fruits, excepting a few chance off-shoots perhaps, have been gained by propagation and cultivation toward an ideal. Thus have arisen the improved cereals and field and garden vegetables. All efforts to produce varieties which shall meet conditions of soil, or climate or market, are pursuits of ideals, and are inspired by a well-ordered imagination. Nor have systems and methods of farm practice been otherwise pursued. They have all been conceived and pursued to success by a purpose to do better, and no purpose which has in view the doing of something new can be formed without the exercise of the imaginative faculty.

Yes, we want our agriculture charged with imagination. It gives us enthusiasm. It stimulates research. It calls for experiment to furnish the materials of progress. It fills us with life, with earnestness and with undying purpose. But while we court imagination to aid us in the attainment of the thousand truths of practice which agriculture in a new State like California must yet possess, we urge all to careful discrimination. Let no half-formed fancy, or illusive freak of thought, usurp the place of imagination. Fancy in literature is the father of the grotesque, the fantastic, the unreal; fancy in agriculture is the guide to failure and disappointment. It is imagination which, laying firm hold upon the truth which is in us and around us, urges us on to new and more successful achievements.

The Big Trees of California.

The "big trees" of California furnish a subject both old and new. It is an old subject because scarcely anything written during recent years concerning our State has failed to include allusions to it. It is new because as the trees are studied more carefully by lovers of nature and of science, new points are brought to light and descriptions full of interesting particulars are furnished by appreciative writers. There is also a feature of novelty about the theme because a firm of adventurous men have brought out from its native wilds, a section of one of the largest trees and cutting it into portable form have started around the world intending to show to all the people who cannot visit the trees a life-sized representation, or rather the shell of one of the specimens of our peerless growths. Such being the fact we give space to an engraving showing one of our forest monsters as it compares with surrounding vegetation and with the ant-like mortals who creep around its base.

Our columns have contained from time to time descriptions of these *sequoias*, as the botanists term them. We recall especially the fervid tributes of Prof. J. G. Lemmon to their sublimity, and his examination of ring growths to prove that the trees are not nearly so old as some writers claim. We propose now to quote some descriptive notes written by that son of the mountains, John Muir, in an article in *Harper's Magazine* for November. He notes some points which we never have read before, and his article generally furnishes much interesting information. He states that the trees in most of the small northern groups have been counted. Those of the Calaveras number 1,200 or 1,300; in the Tuolumne and Merced groups there is less than 100, and in the well-known Mariposa grove, about 600, and in the north King's River grove less than half as many; but the Fresno group, the largest congregation of the north, occupies an area of three or four square miles.

The average stature attained by the big tree, under favorable conditions, is perhaps 275 feet, with a diameter of 20 feet. Few full-grown specimens fall much short of this, while many are 25 feet in diameter and nearly 300 feet high. Fortunate trees, so situated as to have escaped the destructive action of fire, are occasionally found measuring 30 feet in diameter, and very rarely one that is much larger.

Yet so exquisitely harmonious are even the very mightiest of these monarchs in all their proportions and circumstances, there never is anything overgrown or huge-looking about them, not to say monstrous, and the first exclamation on coming upon a group for the first time is usually: "See what beautiful trees!" Their real god-like grandeur in the meantime is invisible; but to the loving eye it will be manifested sooner or later, stealing slowly on the senses, like the grandeur of Niagara, or of some lofty Yosemite dome. Even the mere arithmetical greatness is never guessed by the inexperienced, as long as the tree is comprehended from a little distance in one harmonious view. When, however, we approach so near that only the lower portion of the trunk is seen, and walk round and round the wide bulging base, then we begin to wonder at their vastness, and seek a measuring rod.

Sequoias bulge considerably at the base, yet not more than is required for beauty and safety; and the only reason that this bulging is so often remarked as excessive is because so small a section of the shaft is seen at once. The real taper of the trunk, beheld as a unit, is perfectly charming in its exquisite fineness, and the appreciative eye ranges the massive columns, from the swelling, muscular instep to the lofty summit, dissolving in a crown of verdure, rejoicing in the display of giant grandeur and loveliness,

About 100 feet or more of the trunk is usually branchless, but its massive simplicity is relieved by the fluting bark furrows and loose tufts and rosettes of slender sprays, that wave lightly on the breeze and cast flecks of shade, seeming to have been pinned on here and there, for the sake of beauty alone.

The young trees wear slender, simple branches all the way down to the ground, put on with strict regularity, sharply aspiring at the top, horizontal about half way down, and drooping in handsome curves at the base. By the time the sapling is 500 or 600 years old, this spiry, feathery, juvenile habit merges into the firm, round, dome form of middle age, which, in turn, takes on the eccentric picturesqueness of old age. No other tree in the Sierra forests has foliage so densely massed, or presents outlines so firmly drawn and so constantly subordinate to a special type. A knotty, angular, ungovernable-looking branch, eight or ten feet thick, may often be seen pushing out abruptly from the trunk, as if sure to throw the outline curves into confusion, but as soon as the general outline is approached it stops short, and dissolves in spreading, cushiony bosses of law-abiding

ture was undertaken by Messrs. McKiernan, Manly & Hubbs, of Visalia. The tree from which this section was taken was 111 feet in circumference at the butt, and stood 250 feet in height, at which elevation it was broken off. At the breaking off place it was twelve feet in diameter. These gentlemen have been at work getting this section ready for exhibition for nearly a year. The section is fourteen feet in height and was cut from the body of a tree twelve feet from the ground, the base being so irregular in form, the irregularity extending up from the roots, that it was inexpedient to take

the lowest part. At the distance of twelve feet from the ground the tree was twenty-six feet and six inches in diameter, this being the diameter of the base of the section exhibited. The top of the tree, or stub, as it really was, was felled twenty-six feet from the ground, the labor of felling it occupying four men nine days with axes. It made a noise when it came down that reverberated through the mountains like a peal of thunder. The work of taking out the section which is exhibited was then commenced from the top. The men dug the inside of the tree out with axes, these tools being the only ones that

THE BIG TREES OF CALIFORNIA—*Sequoia gigantea*.

sprays, just as if every tree were growing underneath some huge invisible bell-glass, against whose curves every branch is pressed and molded, yet somehow indulging so many small departures that there is still an appearance of perfect freedom.

The foliage of the saplings is dark bluish-green in color, while the older trees frequently ripen to a warm yellow tint, like the libocedrus. The bark is rich cinnamon brown, purplish in younger trees, and in shady portions of the old, while all the ground is covered with brown burs and leaves, forming color masses of extraordinary richness, not to mention the flowers and underbrush, that brighten and bloom in their season.

The enterprise which has resulted in bringing out a section of one of these monster trees in portable shape was attended by a good deal of daring, as the labor was great. The section is now in this city and will be taken afterwards to the cities of the East for exhibition. The ven-

could be used to advantage. The wood was left six inches thick, exclusive of the bark, which ranges from three to ten inches in thickness. The diameter of the tree where it was felled (the diameter of the top of the section that is to be exhibited) is twenty-one feet. This shell was sawed down, making fifteen gigantic slabs. This tree stood six miles away from a public road, and a road was built this whole distance in order to get this section of the tree out. Each slab made a load for eight horses. The whole fifteen make two carloads.

THE JAPAN PERSIMMON IN SANTA BARBARA. The gardener of Col. Hollister states that one Japanese persimmon tree has 1,000 specimens of fruit on it this year. Many of those purchased two years ago of Henry Loomis, of San Francisco, are in bearing with large and beautiful fruit. Samples of the fruit have been forwarded to Washington and some are to be presented to President Hayes.

Have a Care How You Feed Cheat Meal.

On Thursday last a number of teams made their appearance in Yuba City, among them two ten-horse teams with large wagons and back- actions, and several four and two horse teams, from Nelson's Station, the wagons loaded with cheat, which we were informed it was the intention to have ground for feed for stock. We have no information as to the utility of this kind of feed, but if it proves good it will furnish a means of turning to profitable account this hitherto useless and despised product of our soil in a wet season.—*Sutter Banner*, Nov. 24.

The experiment mentioned by our contemporary is one which should be tried with great caution. The plant, which is commonly called cheat in this State, is *Lolium temulentum*, as has been frequently stated in these columns. This is identical in all points so far observed with the plant of the same name in England, and its popular name is "bearded darnel" or "poison darnel." The poisonous qualities in the plant, according to European experience, lie in the seed. The immature plant is not poisonous, as has been proven by its use as hay in this State. Whether the plant secretes poisonous qualities in its seed in this State, as elsewhere, is yet to be demonstrated, and until the negative is proved we advise our readers to be very cautious in feeding cheat meal to their stock.

As the subject is up and large quantities of the grain are to be ground, we cannot do better than to recite the poisonous qualities found in it in Europe. The late Hon. John Stanton Gould in his report on grasses to the New York State Agricultural Society, states that if the darnel seeds be matted with barley, the ale causes intoxication very suddenly. The effects produced by the seeds are very much like those produced by the ergot of rye, commencing with headache and dizziness, imperfect vision and other symptoms of intoxication. Great numbers of cases are recorded in medical treatises of poisoning by this substance. Great suffering has been occasioned in Scotland when the people were caused by necessity to use the produce of inferior wheat, mixed as it was with the pernicious

darnel. A small farmer, near Poitiers in France, died in consequence of persevering in the use of bread made of such flour, while his wife and servant, who discontinued to eat it after the earlier symptoms, recovered. In some instances people have lost their limbs by gangrene after living for some time on meal in which any considerable quantity of darnel grain was mixed. Between 30 and 40 years ago, according to Dr. Christison, "almost the whole of the inmates of the Sheffield workhouse were attacked by symptoms supposed to have been produced by their oatmeal having been accidentally adulterated with darnel."

This is the foreign character of the seed of the same plant which our farmers propose to grind for feed. Although there

may, perhaps, be a chance for a freedom from this evil in the grain as it grows here, there is certainly reason to be cautious, and feed only experimentally until good or evil are fully established. If any reader knows of the use of this ground cheat before we should like to hear from him.

ON FILE.—"San Bernardino Grange," J. T.; "Tulare Lake," C. W. C.; "Apiary," R. W. K.; "Cultivate Talent," E. F.; "Satisfactory Garden," C. H. S.; "Gardening, etc., in Tulare," J. W. A. W.; "Foothills West of San Jose," T.; "Window Gardening," G. H.; "Economy and Molasses," S. P. S.

SANTA ROSA.—This beautiful interior city has greatly improved during the past few years. We lately found it a quiet, home-like place, possessing good schools, colleges, daily newspapers, churches and happy homes.

GRADING and track-laying on the Southern Pacific at Yuma will soon commence.

Lands for Sale and to Let.

TO LEASE
ON FAVORABLE TERMS,
50,000 Acres of Irrigated Land
in Kern County, with abundance of Water Free.

In tracts of 80 acres and upwards, with comfortable House, good Barn, and Well of excellent water.

CROPS ARE SURE.

An average of 30 bushels of wheat per acre, and other products in proportion, have been raised on this land.

INDUSTRIOUS FARMERS

With stock and implements will find every advantage in acquiring a home and a competence.

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Has on hand and is in constant receipt of Maps and Charts of

Public Lands for Location.

For from \$25 to \$50 I will select and survey for you a good claim, giving full details of its quality and adaptability to different kinds of agriculture or stock raising. I locate Pre-emptions,

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TIMBER, WOOD OR DESERT LANDS,
And have also numerous

Tracts of Cheap Lands For Sale.

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FARM FOR SALE.

\$4,000.—Two Hundred Acres of
Land in Mendocino County.

Thirty miles from the county seat, and 20 miles from the Coast, one of the healthiest localities in the State, especially for consumptives. The place is fenced off in six different fields. Plenty of water and timber for all purposes. A good orchard. Vegetables of all kinds grow well. A good dwelling with six rooms, ceiled and painted inside, good frame barn, granary, storehouse, smokehouse, etc.

Also, Six hundred acres of grazing land, well fenced, three miles from the above farm, plenty of water and timber for all purposes. Price, \$2,250.
For further particulars, address "B. T.," care of DEWEY & CO., Pacific Rural Press office, San Francisco, Cal.

**STOCK RANGE
TO LET.**

Several thousand acres, at a very low rate. Apply soon to EDWARD FRISBIE, Proprietor, on the Reading Grant, Anderson, Shasta County, California.

A Good Dairy Ranch For Sale

On Bear River, Humboldt County, Cal., containing 600 acres of as good grazing land as any in the State. New Dairy and Dwelling House. The land is well watered, and plenty of timber for firewood and shelter, and well fenced. I will also sell with the ranch 100 head of choice dairy cows and five horses. Price, \$13,000, one-half down, the remainder on easy terms for one, two or three years. Apply either in person or by letter to RICHARD JOHNSTON, Post-office address, Myrtle Grove, Humboldt County, Cal., or to R. J. JOHNSTON, No. 1,324 Howard Street, San Francisco.

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One of the best ranges in the State. At present working 375 stands Italian Bees. Apply for particulars to
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Riverside

GRAPE DRIERS, ATTENTION!

Parties who cannot perfectly cure their Grapes by the sun can make liberal arrangements to either sell them or have them cured on my Driers, by applying to

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No. 81 J Street, Sacramento, California.

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Able and reliable canvassing agents, who wish steady employment and good wages for good services, are invited to address this office and send references.

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The largest and best Business College in America. Its teachers are competent and experienced. Its pupils are from the best class of young men in the State. It makes Business Education a specialty; yet its instruction is not confined to Book-keeping and Arithmetic merely, but gives such broad culture as the times demand. Thorough instruction is given in all the branches of an English education, and Modern Languages are practically taught. The discipline is excellent, and its system of Actual Business Practice is unsurpassed.

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FINCH'S CURE ALL.—Warranted to cure all sores, old or fresh, on man or beast.

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MR. S. FINCH.—Dear Sir:—I have given your Horse Medicine a fair trial, and find that it works satisfactorily, and feel fully warranted in recommending it to the public.—Geo. B. McKee, San Jose, October 10th, 1878.

I fully concur in the above testimonial, having given it a thorough test.—S. A. BISHOP, Pres't S. J. & S. C. R. R. Co.
MR. S. FINCH.—Sir:—I have used your Cure All on sores of all kinds, and can say it is the best I have ever had in my barn for man or beast. I have also used your Renovating Medicine, and can fully recommend it to the public. It should be kept in every stable, even to feed occasionally to keep horses in good condition. I keep it in my stable all the time, and would recommend it to all horsemen—especially to those keeping livery and railroad horses.—R. K. HAM, Santa Clara, Cal., October 10th, 1878.

I hereby certify that I have sold Finch's Cure All in Michigan for 10 years, and it has always given good satisfaction. And for the last three or four years have sold it in San Jose, and can truly say that it is one of the best preparations for healing all manner of sores on man or beast I have ever sold.—S. H. WAGNER, Druggist, San Jose, October 10th, 1878.

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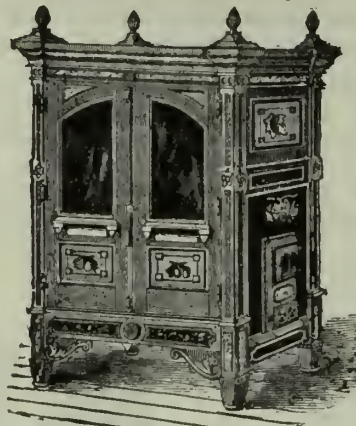
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The Combined Heater, Cooker and Drier is a handsome piece of Black Walnut Furniture, with glass doors and lights, and exactly adapted to the wants of every family in every State of the Union, and is sold and used the year round. It is more simple of construction, more durable and ornamental than anything in the heating or cooking line now before the public, finds ready sale, and can be manufactured anywhere by workmen of ordinary intelligence.

It bakes Bread, Cakes and Pies, to any desired time, without turning or watching, and without danger of burning. No better cooking can be done.
All farmers and economical housekeepers should use them. They are popular wherever introduced. See illustration and description in RURAL PRESS Oct. 26th, 1878, of different apparatus, styles and combinations, or send stamp for illustrated circulars and full description. Address,

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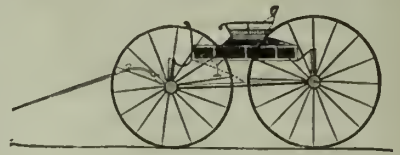
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He will also furnish free water for the first year to irrigate Fruit Trees, Vines and Vegetables to all persons starting new places and improving the same, provided they make application in advance to

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J. H. CAVANAUGH.
Walla Walla, Dec. 24th.

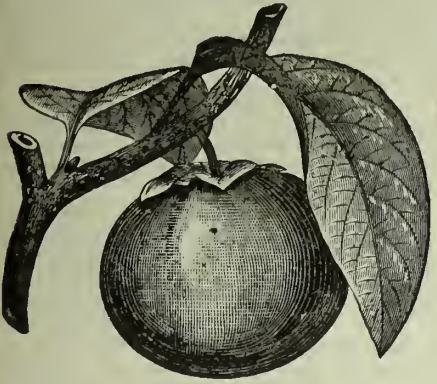
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I offer for sale a large lot of strong, well-rooted plants of the

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On my grounds the Monarch has done splendidly. The plants are strong, vigorous and healthy. The berries large, beautiful and well flavored. From two acres planted in January last, my sales netted over freight and commission, \$1,200 in less than six months.

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Of the most approved varieties. Also, Coffee, Cork Oak, Olives, Guavas, English and Black Walnuts, Magnolias, Loquats, Butternuts, Small Fruits, Evergreens, Etc. We have a choice stock of the Diospyros Kaki (Japanese Persimmon), of our own growing, and also, grafted stock imported direct from several Japan Nurseries. Address for catalogue and terms,

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Or JAMES SHINN, Niles, Alameda Co., Cal.

ESTABLISHED IN 1858.

PEPPER'S NURSERIES.

An unusually fine stock of trees is offered for sale at lowest market rates for reliable nursery stock, comprising all the leading kinds and varieties of hardy fruits. Also a general assortment of evergreen trees and shrubs, blue gums, Monterey cypresses, etc. in boxes for hedge and forest planting. My trees are grown in a sandy loam, without irrigation; can be no finer rooted trees grown; wood ripens early, and can be safely transplanted as soon as sufficient rain falls for lifting the stock. Early planting recommended. Catalogues with list of prices ready for distribution October 1st.

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W. H. PEPPER,
Petaluma, Sonoma Co., Cal.

To Fruit Growers and

NURSERYMEN!

—SEND TO—

Washburne & Reynolds, Ferndale, Humboldt County, California,

For Roots of

THE SALMON BERRY.

Easily cultivated. Larger than the Blackberry, and equal to the Strawberry in flavor. Ripens from March to June, and grows in any soil. For particulars apply as above.

Dutch Flowering Bulbs.

Just received, in prime order, Hyacinths, Tulips, Narcissus, Gladiators, Peonies, Iris, Lilies, Lily of the Valley Tuberoses, Crown Imperials, Oxalis, Ranunculus, Scyllus, Snow Drops, Crocus, etc.

These Bulbs, to succeed well, should be set out at this season of the year. Send in your orders immediately.

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The best budded varieties of both native and foreign Orange and sweet rind Lemon trees for sale. Prices to suit the times. For particulars address

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Semi-Tropical Nursery, Orange P. O., Los Angeles Co., Cal.

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FLOWERING PLANTS and BULBS, FRUITS and ORNAMENTAL TREES, ETC. FANCY WIRE DESIGNS, GARDEN TRELLISES, SYRINGES, GARDEN HARDWARE.

Comprising the Most Complete Stock

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Prices Unusually Low.

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FIELD, GARDEN, LAWN and TREE

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We have largely increased our list of varieties, having imported from the very best growers both in the East and Europe.

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Put up in small packages for the RETAIL TRADE, as also in bulk. ALL DEALERS IN SEEDS will find it for their interest to send their orders to us, as we will guarantee our sales will be on par if not better advantageous to the purchaser. We make specialties of

ALFALFA, RED CLOVER, TIMOTHY,

Red Top, Kentucky Blue Grass, Hungarian Grass, Millet, Lawn Grasses, Etc.

Also, FLOWERING BULBS of every description.

Catalogues furnished free on application. We also do a WHOLESALE COMMISSION BUSINESS, handling all kinds of California Green and Dried Fruits, Nuts, Honey and General Merchandise.

All orders promptly attended to. Address

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Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

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Wholesale and retail dealers in and

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Keep Constantly on hand a complete stock of Vegetable, FIELD, GRASS, FLOWER & TREE SEEDS.

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We call attention of farmers and country merchants to our unusually low prices. All seeds warranted fresh, pure and reliable. Trade price list on application.

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Crosby's Extra Early Marblehead Mammoth } Sweet Corn.
Stowell's Evergreen }
Mexican Sweet, New }

Early Canada } Yellow Flint Corn.
Early Dutton }

Long Red Mangel Wurtzel } Beet Seed.
Yellow Globe }
White Sugar }

Also, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,
No. 317 Washington Street, San Francisco

E. J. BOWEN'S SEEDS.

A General Assortment of

GARDEN and FLOWER SEEDS

Neatly put up in papers and packages with description of variety, general directions for cultivation on each paper, and bearing my name, are for sale by responsible merchants throughout the Pacific States and Territories. My stock of

CLOVER, GRASS,

VEGETABLE, and Miscellaneous SEEDS, in bulk, is also large and complete.

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Seed Merchant and Importer,
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Incorporated February 10th, 1875.

Capital Stock, - - \$1,000,000.

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We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

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Location: K & 10th Sts., Sacramento, Cal

Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are cash on delivery. Goods shipped; marked G. O. D.

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The largest stock, best variety, and lowest prices of substantial furniture on the Pacific Coast is at

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MRS. M. B. SMITH will purchase and forward goods of every description at reasonable commission. For Circulars giving full information and unexceptionable references, address her, No. 200 Stockton St., San Francisco.

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A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 323 Front street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importers and Breeders of Thoroughbred Poultry. Eggs for hatching.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

A. J. TWOGOOD, Riverside, Cal., Importer and Breeder of Pure Bred Poland-China Hogs.

W. & J. ROBINSON, Hanford, Tulare Co., Cal., Importers and Breeders of Thoroughbred Berkshire Swine and Pure Brown Leghorn Fowls. Trios a specialty.

Poultry.

THOROUGHbred POULTRY.

116 Acres

Unlimited Range.

DEVOTED TO

Healthy Stock.

FANCY

Largest Yards

POULTRY. on the Coast.

Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Figs, Etc.

Safe arrival of Fowls and Eggs Guaranteed.

Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents.

Send stamp for price list. Address

M. EYRE, Napa, Cal

EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

Grangers' Bank of California,

42 California Street,

SAN FRANCISCO CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,

ALBERT MONTEPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

MONEY ADVANCED ON

WHEAT

In Warehouse at the Lowest Rates.

McAFEE BROTHERS,

No. 202 Sansome Street, San Francisco, Cal.

DAVIS & SUTTON,

No. 75 Warren Street, New York

Commission Merchants in Cal. Produce.

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

Artesian Wells.—No. 4.

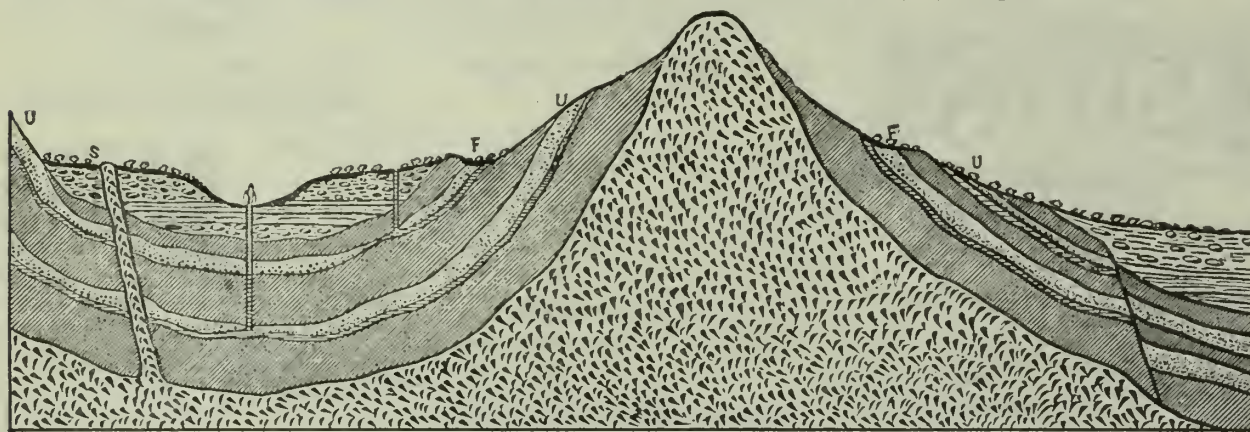
Character of Material.

Spon says, in his "Practice of Sinking and Boring Wells": "Every permeable stratum may yield water, and its ability to do this, and the quantity it can yield, depend upon its position and extent." The type of permeable material is sand; of impermeable, compact clay. As rock is full of irregular fissures water does not exist in it in regular strata, there is small chance of obtaining water in it, and for this reason, as well as on account of the difficulty of boring in it, rock is avoided as much as possible. Between sand and clay, there are innumerable grades of permeability according as the one or the other predominates or as other material, for instance, gravel is mixed with these. Experiments by Prestwich, quoted by Spon, have shown that ordinary siliceous sand will hold about one-third of its bulk of water, or from two to two and one-half gallons per cubic foot. When clay and gravel are introduced the amount absorbed is less. When the material is compacted as in sandstone or limestone water is still absorbed but in very diminished quantity. Drift material, consisting largely of sand and gravel brought down comparatively recently by rivers or floods, may yield water, but not in large supply. Alluvion, consisting of sand, gravel, rolled pebbles, clays, and found in the valleys of great rivers, is distributed more regularly than drift and over more surface and hence may yield larger supply of water. But, as has been already many times hinted, it is in more regular, more widely extended, and, generally speaking, deeper strata of sandstones, limestones and clays, that reliable supplies are to be sought. The striking of rock is, of course, no sign of failure. The rock may be drilled through, or if it is merely a boulder it may be avoided by another boring.

The Climate.

The amount of rainfall on the outcrop of water-bearing strata determines the quantity of

auger; for rock, a drill. The rods for sinking the auger, may be made of stout poles, joined together by wrought-iron couplings, and may be gotten up by any good carpenter and blacksmith. For obvious reasons it has been recommended to make the rods of straight-grown trees, of requisite diameter. Iron rods and pipes are used frequently, but while better than wood on many accounts, are much more expensive. Wooden rods may be turned by a stout wooden lever; for the iron rods and iron lever is better. The iron couplings for the rods are made with shoulders, upon which iron shoes attached to the hook on the tackle block catch, and by this means the rods are raised and lowered. Two of these shoes are needed. In the vast majority of cases the well must be tubed. Where any great lateral pressure is exerted by the strata passed through, it is necessary to use considerable force in the sinking of the tubes. They are best made of sheet iron, lack or galvanized. Upon the lower pipe, a steel ring sharpened on its lower edge, is riveted, and serves out the way for the pipe. It must be stoutly riveted, for its detachment when at considerable depth may ruin the well. The pipe may be forced down by applying sufficient pressure at the top, in almost any convenient way. Sometimes an iron ring is fitted over the top of the pipes. Chains attached to the ring descend and are wound about a lever made of two stout timbers, spread so as to include the pipe. One end of the lever is fastened to the ground a foot or so from the pipe. The long end extends out for some twenty or thirty feet on the other side of the pipe, and is weighted. By this means tremendous pressure is exerted on the pipe. When sinking the pipe, sand or other fine material has to be removed from the bottom. This is accomplished by a sand-pump. If the hole is not large enough to allow the pipe to pass, reamers are used to scour it out larger under the end of the pipe. With an outfit such as this, and in addition a few tools for recovering articles that may accidentally fall down the well, arrangements for soldering the pipes, and sharpening the cutting apparatus, any intelligent and careful man, with a couple of laborers, can sink an artesian well in favorable ma-



WATER-BEARING STRATA—SHOWING FAVORABLE AND UNFAVORABLE OUTCROP.

water that may probably be obtained from them at a distance by artesian borings. An entirely rainless district may be supplied with artesian water. In fact the gentle tilting of alternating pervious and impermeable strata seems to be a special arrangement of nature, by which low, dry, unwatered plains may receive their share of irrigation. All that is needed is rain on the surrounding highland where the edges of the water-bearing strata are turned up and exposed. An examination into the condition of this outcrop (as in the last article) of its extent and of the rainfall upon it, may furnish data for roughly calculating the amount of water that the plains may expect to be able to obtain. For instance, on a steep outcrop less water can be absorbed than on a more level one; again, less water can be appropriated by the outcrop from a deluge immediately followed by burning sunshine, than from a long continued drizzle followed by dull cold days. It is unnecessary to enter further into this. The entire subject in fact is very simple and even suggestions are hardly necessary to an intelligent and observant mind.

In the engraving, U, U, U, represent outcrops of the water-bearing strata, worn down until they are so steep that a large percentage of the water will run off. F, F, represent more favorable outcrop. On the left a dike, thrust up from the rock below, has formed an impenetrable barrier to the water, and springs are likely to appear at S. The slip on the right would produce a similar result.

The Tools.

Artesian well-boring machinery has been made quite a study. A great number of inventions and improvements have been made over the primitive auger and rods, so great a number that it would be impossible in a short space even to name, much more so, to describe and explain them. Only the most necessary apparatus will be mentioned without description, leaving the latter to cuts which will appear in the next issue.

A derrick is required, which may be easily rigged out of three spars. It must be at least as high as the length of the longest rods to be used in sinking the auger. A tackle is necessary for use with the derrick; also a barrel and cranks for winding the tackle rope. For boring in stiff clays, a twist auger of some kind is needed; for working in soft materials, a pod-

terial and to a reasonable depth, say 200 or 300 feet.

We had the cost of tools prepared for this issue, but it is crowded out. It will be published in our next, together with cuts of the tools and description of methods.

We grieve to learn that the dread scourge of yellow fever invaded the circle of our friends and contributors in Louisiana. Miss Mary T. Riley, who wrote the excellent little poem entitled "The Indian Pipe," which was lately printed in our "Home Circle," died, together with her father, Rev. J. A. Riley, and four brothers and sisters. There are now left of the afflicted family but the bereaved mother, who was visiting in New Jersey, and a son who escaped the plague. They have our sincerest sympathy.

PACIFIC COAST POSTAL CHANGES.—Offices established—Contra Costa, Cal., Henry Wilkenning, Postmaster; Date Creek, Yavapai county, Arizona, Henry Addones, Postmaster; Tebbdale, Iron county, Utah, Daniel F. Telbs, Postmaster. Names changed—Mosquito Gulch, Calaveras county, Cal., to Glencoc, and Julius A. Lindsay appointed Postmaster. Postmasters appointed—Thomas J. Gould, Hermitage, Mendocino county; George C. Shaw, Omega, Nevada county; Frank W. Hilton, Round Valley, Inyo county, Cal. David Wigginton, Scholl's Ferry, Washington county, Oregon. Darius Rogers, Ferndale, Whatcom county; Wm. L. Steinweg, Sehome, Whatcom county, Washington Ter. J. H. Walcott, Ophir, Tovelva county, Utah. Joseph Guindare, Florence, Pinal county, Arizona.

DESCRIPTIVE CATALOGUE.—The new descriptive catalogue of fruit trees and ornamental plants issued by Shinn & Co., of Niles, Alameda county, is a very interesting pamphlet, and should be consulted by all planters. Its lists will be found very full, and the notes upon the special varieties of different fruits, contain information of much value. The catalogue is embellished with a colored plate, showing two varieties of the Diospyros kaki.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING OCTOBER 22D, 1878.

DREDGING MACHINES—Geo. W. Cummings, S. F. ORE STAMPS—Zaccheus L. Kay, San Diego, Cal. EGG BEATERS—Wm. H. Wiester, S. F. BENCH PLANES—Patrick Gallagher, Eureka, Nev. COUGH REMEDIES—Trademark—James D. Culp & Co., S. F.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

CAMAS ROOT FOR HOG FEED.—The attention drawn to camas root by publications concerning it at the time of the late Indian troubles in Idaho, is leading to the introduction of the root for hog feed in this State. In our issue of July 26th, we gave an illustration of the root and some interesting facts concerning it. The testimony from Idaho concerning the plant, is favorable to experiments with it at least: S. C. Hutchings, writing from Lewiston, Idaho, says: "Being an old resident of your State, I wish to tell you of this plant. I am satisfied that it will grow well where there is least moisture, either by irrigation or otherwise. It is abundant in growth and produces a large amount of feed to the acre. Although it grows here upon elevated lands, yet in the swales it is covered for weeks by water, but receives no injury by being flooded. There is no doubt

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, November 6th, 1878.

The Wheat market has awakened and speculative feeling is much revived. Local prices have scored a notch in advance and the cable makes a little better mark for Liverpool. It behooves holders of Wheat to watch out now for awhile.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday....	9s	7d	9s	9d	9s	9d	10s	1d
Friday.....	9s	7d	9s	10d	9s	9d	10s	2d
Saturday....	9s	7d	9s	10d	9s	9d	10s	2d
Sunday.....	9s	7d	9s	10d	9s	9d	10s	2d
Tuesday....	Election				Holiday			
Wednesday..	9s	8d	9s	11d	9s	10d	10s	2d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1876.....	10s	3d	10s	6d	10s	5d	10s	9d
1877.....	12s	7d	12s	11d	12s	10d	13s	4d
1878.....	9s	8d	9s	11d	9s	10d	10s	2d

The Foreign Review.

LONDON, November, 5.—The *Mark Lane Express* says: Active progress has been made in sowing, and in some of the earlier districts Wheat is beginning to show. These, however, are exceptions, as it will probably be another fortnight before the bulk of Wheat will have been sown. English Wheat has been marketed more sparingly both in London and the provinces. A healthy tone has predominated, although, to the present, without any effect on prices. Some samples shown have been better, but the large proportion of offerings consisted of damp, discolored or sprouted lots, which naturally were only salable at ruinous prices. Indeed, farmers' deliveries throughout the kingdom fully testify to the fact that the English Wheat crop has suffered enormously from deteriorating consequent on the damp condition in which it was gathered. The imports of foreign Wheat into London were fair. Except for the action of America we should have seen better prices, but shipments have been so large, and the movement to tide water so active, that neither the badly-conditioned home crop nor a good continental demand have been able to combat the depression.

Freights and Charters.

The *Call* says: The Freight market is quiet. Shippers offer 35c for wooden vessels for Wheat to Liverpool, but ship owners, as a rule, ask more.

Eastern Grain Markets.

NEW YORK, November 2.—Grain exports continue the heaviest to the continent, particularly to France, the English market still ruling below ours. Some large contracts for English account have been made in the West, but here purchases for Great Britain have been quite light. The visible supply at this port awaiting distribution is nearly equal to the maximum capacity of the elevators, while the quantity that is coming forward is far in excess of that capacity. It would be a serious question as to what to do with the grain as it arrives, were it not for an assurance that the necessities of Western Europe are such as to leave but little doubt that there will be a market abroad for our surplus crops, large as they are, at any where near current values.

CHICAGO, November 2.—The past week's Grain market has been without notable features. For a day or two rumors of impending strife in Europe created a little flurry, which quieted down and closed pretty weak, with chances favoring a further small decline, especially in Wheat. Sales of No. 2 Spring Wheat for December, 81½¢@84¢; Corn, December, 32½¢@32¾¢; Oats, December, 19½¢@20¢; Rye, cash, 44¢@44½¢; Barley, cash, 89¢@90¢. Provisions declined very decidedly, and at the first of the week suddenly and with good speculative fluctuations went steadily down to about the lowest prices of the season. Pork sold at \$6.90@7.25 for December. Lard was weak at the close, selling at \$5.87½@5.05 for December.

Eastern Wool Markets.

NEW YORK, November 2.—There has been a fair inquiry for Wool during the week, but purchases, as a rule, have been confined to limited parcels for the purpose for bridging over the present, not the least disposition being manifested by any of the numerous buyers to anticipate their probable future requirements, notwithstanding current rates are extremely low and generally believed to be on bottom. This situation of affairs is directly attributable to a continuance of inactivity in the goods market, and also to the fact that the future offers no inducement for buyers to stock up with goods in their present condition, and the prospect of no advance in the price of raw materials. Medium grades continue to have the preference, but fine occasionally meets with fair attention. Foreign, both clothing and carpet, are neglected. Sales comprise 20,000 lbs Spring California, at 24¢; 68,000 lbs Fall do, 14¢@17¢; 2,000 lbs secured

Dairy Ranch Wanted.

A man who can command a reasonable amount of capital, is thoroughly experienced in the business in California, and pecuniary responsible, wants to hire a good Dairy Farm with 100 or more cows, for one or more years; valley land preferred. Address A. D., P. O. Box 70, Oakland, Cal. Reference—Office of the "Rural Press."

Wanted—Farms to Rent and to Purchase.

I have numerous customers in search of rural property daily applying at my office. Send full particulars. Address: A. Zeelandelaar (formerly with Labor Exchange) Real Estate, Business and Employment Agency, No. 627 Sacramento street, San Francisco. (Furnishes all kind of farm labor at the shortest notice free of charge to employers.)

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

POPULAR MUSIC.—Make your homes merry and populous with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. The *RURAL PRESS* can offer to introduce you there.

A COMMENDABLE ENTERPRISE IN SAN JOSE.—Bro. Her-ring, late of the *Agriculturist*, has charge of the Union Free Reading Room, San Jose. He is endeavoring to establish the Institution upon an enduring basis for the benefit of all.

THE celebrated Troy (N. Y.) shirts can be found at Palmer Bros., No. 726 Market street, San Francisco. They keep a full and complete stock, laundered and unlaundered, of men's and boys' sizes of the above make.

WHEN A LADY wants a cloak or suit for herself or child and feels in doubt where to buy it, we cheerfully recommend her to go to Sullivan's, No. 129 Kearny street, San Francisco, where she can always find the cheapest and best assortment.

do, 52½c; 10,000 lbs California Lamb's, 19½c; 7,500 lbs Utah, 23½@24½c; 15,000 lbs Colorado, 14@18c; 2,000 lbs Valley Oregon, 30c; 8,000 lbs Eastern do, 21c; 2,000 lbs Spring Texas, 22c; 40,000 lbs Eastern and Western do, 18@25c; 4,000 lbs low mixed do, 12c.

Boston, November 2.—The trade in domestic Wool is unchanged. Manufacturers continue to purchase as wanted, and are still more or less indifferent about future supplies, while holders are free sellers at current rates. There is, however, no pressure to sell at any further concessions. The amount of Wool taken by manufacturers since July has been fully up to expectations, even if prices have not been satisfactory. During the past week there has been quite a lively demand for combed and delaines, and all available lots were bought. Sales include Ohio and Pennsylvania X, XX, and XXX and No. 1, at 34@38c; Michigan X, at 32½@33c; New Hampshire X, at 33c; Maine medium, at 36½c; combed and delaine, 35@44½c; unwashed combed, at 21@30c; Oregon, at 23@29½c; fine Missouri, at 27½c; Territory, at 19@25c; scoured at 42@62c; tub-washed at 33½@39c; super and X pulled, at 25@39c. California Wools are quiet, sales for the past week being the smallest of several months, comprising only 164,000 pounds, at 15@20c. for Fall, and up to 27c. for Spring.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Oct. 16.	WEEK. Oct. 23.	WEEK. Oct. 30.	WEEK. Nov. 6.
Flour, quarter sacks...	30,254	45,568	27,713	30,172
Wheat, centals.....	241,046	251,329	288,393	176,632
Barley, centals.....	72,823	84,143	64,858	68,801
Beans, centals.....	10,364	9,380	16,291	16,287
Corn, centals.....	3,651	2,285	2,829	5,214
Oats, centals.....	12,729	20,750	24,567	7,376
Potatoes, sacks.....	17,539	14,841	25,328	20,166
Onions, sacks.....	1,410	2,363	1,025	468
Wool, bales.....	5,763	5,866	6,461	3,128
Hops, bales.....	2,888	525	1,207	253
Hay, bales.....	2,404	1,798	2,279	1,515

BAGS—The combination has gone to pieces, and standard Wheat Bags have dropped to 9½@10½c, as a nominal quotation, and lots could probably be bought lower.

BARLEY—Barley is unchanged and rather dull. We note sales: 400 sks Coast Feed sold at 80c; 250 do, at 87½c; 1,300 good Brewing at \$1.17½ ctd.

BEANS—Receipts of Beans are still liberal, and prices weaken under them; 300 sks Pink sold as low as \$1.95. Other kinds are as shown in our list. The market seem disposed to fluctuate.

CORN—Sales have been within last week's range, with a little lower tendency in the market. We note sales: 189 sks small Yellow sold at \$1.16½; 107 do large White, 100 do small yellow and 200 do large Yellow at \$1.15 ctd.

DAIRY PRODUCE—Fresh roll Butter is now considerably in excess of demand, and it is impossible to sell anything but an occasional single box at full prices. Consumers are eating at the large amount of pickled roll, firkin and imported Butter, which can be had at low prices. Cheese is unchanged.

EGGS—Have improved a little; fresh California bring now 45@46c, and Oregon best gaining 37½c per doz.

FEED—Cornmeal is lower, in sympathy with the easier Corn market. Hay is quiet, but prices show a good tendency, the choicest Wheat now sometimes touching \$15 per ton. Middlings is slightly lower than a week ago.

FRUIT—Supplies are now considerably reduced, and the street stands are beginning to wear a Winter face. A few changes in prices may be seen in our list.

HOPS—A freer movement is expected during the coming week, as buyers for Chicago and New York are reported to be looking around. There will also be an Australian steamer clearing, which will make a demand. Holders are now asking 8c for Washington Territory Hops, and 9@12½c for California, as to quality. Advances from New York contain no news.

LIVE STOCK—We note sales: 1,300 Hogs, at 4 1/16@4 1/4c per lb alive, silver; 900 do, at 4c; 360 do, at 3½c; 56 Calves, medium (200 lbs), \$8 each; 117 small, thin Calves, \$5.50; 288 Cattle, fair, \$23 per head; 790 Goats, 87½c each; 22 Cows, dry, \$15; 2,300 sheared Sheep, at \$1.75 each; 810 Lambs, fair, \$1.62½, wool on; 500 sheared Sheep, \$1.50.

OATS—Choice Oats are still doing well, and have scored an advance during the week: 100 sks good Feed sold at \$1.50; 340 do at \$1.45; 386 good Coast at \$1.27½ ctd.

ONIONS—Onions have taken a step upward, and all good sorts now range at \$2.25@2.37½ ctd. There are some poor, soft Onions arriving on the coasting steamers which do not gain above \$1.75 ctd.

POTATOES—A cheapening of Humboldts, Cuffey Coves and Sweet Potatoes is the only variation.

POULTRY AND GAME—Our list shows prices reduced somewhat, but Thanksgiving is coming and a reaction is to be expected.

PROVISIONS—The only change is a decline of 1c on light Bacon and Smoked Beef.

VEGETABLES—Cucumbers and Summer Squash have advanced. There are now some Tomatoes, the fog ends of the season, being sold at 10c per box for catsup.

WHEAT—The improvement in Wheat is elsewhere noted. Sales have been as follows: 2,000 and 600 cts Gilt Edge, at \$1.80, and 1,900 choice Milling, \$1.76½; 18,000 choice

Shipping or Milling, \$1.76½; 1,800 good Milling, 8,000 good Shipping, \$1.75; 5,000 good Shipping and 2,000 Oregon, \$1.72½; 600 fair Milling, \$1.67½; 10,000 off grade, \$1.65, a resale of a portion of the same at \$1.70; 2,000 off grade, \$1.50; 4,000 do, \$1.55; 2,000 do, \$1.51½; 200 do, \$1.45; 300 and 375 do, \$1.40; 860 and 800 do, \$1.37½; 400 do, \$1.32½; 200 do, \$1.25 ctd.

WOOL—The situation is unchanged except that there is noticeable a little better demand for Mendocino and Humboldt, and the price has advanced ½ cent per lb. We note sales of 300,000 lbs Wool, as to the quality at 11½@17½ cents per lb. Our quotations in adjacent table represent the range of the market.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., November 6, 1878.

BEANS & PEAS. Almonds, hd shd lb 7 @ 8
Soy, ctd..... 2 00 @ 25
Butter..... 2 50 @ 30
Pea..... 2 37½ @ 62½
Red..... 1 87½ @ 12½
Pink..... 1 87½ @ 12½
Sml White..... 2 25 @ 50
Lima..... 1 00 @ 50

BROOM CORN. Old..... 3½ @ 7
New..... 4½ @ 8

CHICORY. California..... 4 @ 4½
German..... 6½ @ 7

DAIRY PRODUCE, ETC. BUTTER.
Cal. Fresh Roll, lb 35 @ 40
Fancy Brands..... @ 40
Pickled Roll..... 24 @ 27½
Firkia..... 21 @ 25
Western..... 12½ @ 17
New York..... 27½ @ 30

CHEESE. Cheese, Cal., lb..... 8 @ 12½
Eastern..... 8 @ 11
N. Y. State..... 17 @ 18
Girroy Factory..... 11 @ 13

EGGS. Cal. fresh, doz..... 45 @ 46
Ducks..... @ 30
Oregon..... 18 @ 25
Eastern..... 25 @ 27½
do by express..... 25 @ 27½
Pickled here..... @ 27½

FEED. Bran, ton..... 15 00 @ 16 00
Corn Meal..... 25 00 @ 27 00
Hay..... 7 50 @ 15 00
Middlings..... 22 00 @ 25 00
Oil Cake, Mex..... 34 00 @ 40 00
Straw, bale..... 25 @ 60

FLOUR. Extra, bbl..... 12½ @ 57½
Superfine..... 4 00 @ 25
Graham, lb..... 3 @ 3½

FRESH MEAT. Beef, 1st quality, lb 5 @ 5½
Second..... 4 @ 4½
Third..... 3 @ 3½
Mutton..... 3 @ 4½
Spring Lamb..... 5 @ 6
Pork, dressed..... 4 @ 4½

DRESSED. Dressed..... 54 @ 6
Veal..... 5 @ 7
Milk Calves..... 6½ @ 7
do choice..... 7 @ 7½

GRAIN, ETC. Barley, feed, ctd..... 85 @ 105
Brewing..... 15 @ 25
Chevalier..... 75 @ 90
Buckwheat..... 50 @ 60
Corn, White..... 10 @ 11½
Yellow..... 12 @ 11½
Small Round..... 12 @ 11½

OATS. Oats..... 12½ @ 17
Milling..... 10 @ 16
Rye..... 27½ @ 30
Wheat, Shipping..... 1 62½ @ 80
Milling..... 1 67½ @ 80
Off Grades..... 1 40 @ 60

HIDES. Hides, dry..... 16 @ 16½
Wet, salted..... 7 @ 9

HONEY, ETC. Beeswax, lb..... 30 @ 31
Honey in comb..... 11½ @ 12
do No 2..... 8 @ 9
Dark..... 8 @ 9
Strained..... 5 @ 5½

HOPS. Oregon..... @ 8
California..... 8 @ 12½
Wash. Ter..... 8 @ 9
Old Hops..... 3 @ 5

NUTS—Jobbing. Walnuts, Cal..... 8 @ 9
do Chile..... 7 @ 8

FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., November 6, 1878.

FRUIT MARKET. Apples, box..... 75 @ 1 00
do Cooking..... 35 @ 50
Bananas, hch..... 2 50 @ 5 00
Cocoanuts, 100..... 5 00 @ 6 00
Cranberries, hbl..... 13 @ 14
Figs, lb..... 3 @ 6
Grapes, com, bx..... 35 @ 50
Grapes, chice, do..... 75 @ 1 00
Limes, Mex..... 9 00 @ 12 00
do, Cal, per M..... @ 25
Lemons, Cal M..... 9 00 @ 11
Sicily, box..... 9 00 @ 11
Australian, bx..... 7 00 @ 7 50

ORANGES, Mex. M..... 35 @ 40 @ 40
Tahiti..... @ 40
Cal..... @ 40
Peaches, box..... @ 40
Pears, box..... 1 00 @ 2 00
Pineapples, doz..... 3 00 @ 4 00
Plums, lbs..... 4 @ 5
Quinces, hsk..... 75 @ 1 50
St'wberries, chst..... 5 00 @ 7 00

DRY FRUIT. Apples, lb..... 3 @ 5½
Apricots..... 15 @ 20
Citron..... 23 @ 24½
Dates..... 9 @ 10
Figs, Black..... 4 @ 6
White..... 6 @ 8
Peaches..... 7 @ 8½

VEGETABLES. Beets, ctd..... 50 @ 60
Beans, String..... @ 40
Cabbage, 100 lbs..... 40 @ 50
Carrots, ctd..... 40 @ 50
Cauliflower, doz..... 50 @ 60
Cucumbers, bx..... 50 @ 60
Egg Plants, hsk..... 75 @ 1 00
Garlic, New, lb..... 2 @ 2½
Green Corn, doz..... 10 @ 15
Green Peas..... 3 @ 4
Lettuce, doz..... 10 @ 12
Parsnips, lb..... 2 @ 3
Horseradish..... 8 @ 10

VEGETABLES. Hush, Marrow..... @ 50 @ 60
fat, tn..... 5 00 @ 6 00
Summer, do, hsk..... @ 1 00
Tomato, 50 lbs bx..... 35 @ 40
do, Catsup..... @ 10
Turnips, ctd..... 50 @ 60
White..... 50 @ 60

Gold, Legal Tenders, Exchange, Etc [Corrected Weekly by SUTRO & Co.]
SAN FRANCISCO, November 6, 3 P. M.

LEGAL TENDERS IN S. F., 11 A. M., 99½@99, SILVER, 1½@1½.
Gold in New York, 100.
GOLD BARS, 890@910. SILVER BARS, 82@82 1/2 cent. dis.

EXCHANGE ON NEW YORK, 1/2, on London bankers, 49½@49½.
Commercial, 50; Paris, av francs 1/2 dollar; Mexican dollars, 89½@90½.

LONDON CONSOLS, 95 9/16; Bonds, 107 1/2 ex coupon.
QUICKSILVER IN S. F., by the task, @ 10, 41½@41½.

Mrs. C. F. YOUNG, the well-known writer and lecturer, now residing in Nevada city, has been appointed agent for those two popular journals, the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, and will make a thorough canvass of the county in their behalf. Every farmer and miner, and all who are interested in any way with these two industries—who is not in this county!—should take one or the other of these publications.—Foot-hill Tidings, Grass Valley.

GREAT SLAUGHTER

IN SEWING MACHINES.

We are now offering for sale, at \$10 EACH, the following machines:

FLORENCE,

WHEELER & WILSON,

GROVER & BAKER.

THESE MACHINES ARE

Guaranteed to be in Perfect Order,

And many of them NEW.

Parties in the country can have them packed and shipped free of any extra charge. Address,

WILCOX & GIBBS Sewing Machine Co.,

No. 124 POST STREET,

SAN FRANCISCO, CAL.

TO LADIES—SILK.

Substantial reasons why Ladies should

Buy California Sewing Silk.

It is made from the very best Tsaltee Silk. It is warranted all it is represented to be.

It is a California production, and is made entirely by white labor, giving employment to a large number of women and girls.

The Company guarantees every spool of the following brands: California 1-ounce spools, California 1-ounce spools, the extra California 100 yards spools and California button hole twist. Should any of the above brands prove unsatisfactory, they will gladly exchange them.

Sold by all first-class dealers. Ask for CALIFORNIA SILK; take no other.

California Silk Manufacturing Company,

No. 585 Market Street, San Francisco,

R. R. YATES, AGENT.

INSTALLMENT NOTICE.

GRANERS' BANK OF CALIFORNIA.

OFFICE: N. E. COR. CAL. AND DAVIS STS., S. F.

Notice is hereby given that at a meeting of the Directors, held on the 8th day of October, 1878, an Installment (No. 4) of Ten (10%) per cent, equal to Ten (\$10) dollars per share, was levied upon the Capital Stock of the Bank, payable immediately, in U. S. Gold Coin, to the Cashier at the office of the Bank. Any Stock upon which this Installment shall remain unpaid on the 1st day of December, 1878, will be Delinquent and disposed of according to law.

G. W. COLBY, President.

FRANK McMULLEN, Sec'y.

San Francisco, October 14th, 1878.

DIVIDEND NOTICE.

Notice is also given that a Dividend (No. 4) of Ten (10%) per cent, equal to Three (\$3) dollars per share, on the paid up Capital of the Bank, was declared at the same time and place; due and payable immediately at the office of the Bank as above stated.

G. W. COLBY, President.

FRANK McMULLEN, Sec'y.

CERTIFICATE OF PARTNERSHIP.

The undersigned, having formed a partnership to carry on the business of General Publishers under the firm name and style of Dewey & Co., Publishers, this certifies that the principal place of business of said partnership is situated at 202 Sansome street, in the city of San Francisco, State of California; and that Alfred T. Dewey, residing in the city of Oakland, State of California, and Warren B. Ewer, residing in the city of San Francisco, State of California, are all the members of said partnership.

ALFRED T. DEWEY.

W. B. EWER.

STATE OF CALIFORNIA, } ss.
CITY AND COUNTY OF SAN FRANCISCO.

On this second day of October, in the year one thousand eight hundred and seventy-eight, before me, Chas. E. Kelley, a Notary Public in and for the said city and county, personally appeared Alfred T. Dewey and W. B. Ewer, known to me to be the persons whose names are subscribed to the within instrument, and they acknowledged to me that they executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

CHAS. E. KELLEY,

Notary Public.

Endorsed—Filed October 7th, 1878.

THOS. H. REYNOLDS, County Clerk.

By J. WHALEN, Deputy Clerk.

CERTIFICATE OF PARTNERSHIP.

The undersigned, having formed a partnership to carry on the business of Patent Agents under the firm name and style of Dewey & Co., Patent Agents, this certifies that the principal place of business of said partnership is situated at 202 Sansome street, in the city of San Francisco, State of California; and that Alfred T. Dewey, residing in the city of Oakland, State of California, and Warren B. Ewer, residing in the city of San Francisco, State of California, and George H. Strong, residing in the city of Oakland, State of California, are all the members of said partnership.

ALFRED T. DEWEY,

W. B. EWER,

Geo. H. STRONG.

STATE OF CALIFORNIA, } ss.
CITY AND COUNTY OF SAN FRANCISCO.

On this second day of October, one thousand eight hundred and seventy-eight, before me, Chas. E. Kelley, a Notary Public in and for the said city and county, personally appeared Alfred T. Dewey, W. B. Ewer, and George H. Strong, known to me to be the persons whose names are subscribed to the within instrument, and they acknowledged to me that they executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

CHAS. E. KELLEY,

Notary Public.

Endorsed—Filed October 7th, 1878.

THOS. H. REYNOLDS, County Clerk.

By J. WHALEN, Deputy Clerk.

50 Perfumed, Snowflake, Chromo, Motto, etc., CARDS, with name, 10c. G. A. SPRING, E. Wallingford, Cal.

VERTICAL FEED

VICTORIOUS!

THE NEW

DAVIS VERTICAL FEED

Lock-Stitch Sewing Machine.

LIGHTEST RUNNING

Shuttle Machine in the World.

All lovers of progressive science and mechanical perfection should see it, and every lady in the land should examine and try the "DAVIS VERTICAL FEED" before deciding to purchase an inferior machine, or a single-thread plaything without a tension.

It is impossible to make a strong, elastic, or lock-stitch with any but a shuttle machine.

We are selling WHEELER & WILSON, GROVER & BAKER, SINGER and HOWE Machines for \$10 Each.

For descriptive circulars, price lists, samples of work and terms, apply at the office of the

PACIFIC COAST DEPARTMENT,

130 Post Street, San Francisco, Cal.

MARK SHELTON, AGENT.

Underfeed Machines taken in exchange as part payment. Our prices are very low for cash. Branch Office, 26 Fourteenth Street, Oakland, Cal.

A GOLD MEDAL

Has been awarded at the Paris Exhibition of 1878 to

CLARK'S

O. N. T.

Best SIX CORD SPOOL COTTON. It is celebrated for being STRONG, ELASTIC, and of UNIFORM STRENGTH. It has been awarded MEDALS at the great Expositions, from the first at Paris, in 1855, to the Centennial at Philadelphia in 1876. In this country CLARK'S O. N. T. SPOOL COTTON is widely known in all sections for its Superior Excellence in Machine and Hand Sewing. Their Mills at Newark, N. J., and Paisley, Scotland, are the largest and most complete in the world. The entire process of manufacture is conducted under the most complete and careful supervision, and they claim for their American production at least an equal merit to that produced in Paisley Mills. As

NO GRAND PRIZES were awarded at Paris for SPOOL Cotton,

They are glad to announce to the American Public that they have been awarded a GOLD MEDAL, being the highest award given for Six-Cord Spool Cotton.

Geo. A. Clark & Brother,

SOLE AGENTS,

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MONEY FOOD

For Farmers. For Hogs.

CHEAP PORK.

The Brazilian Aritchoke

Is the cheapest and best food for Hogs, being ahead of anything in existence for that purpose. 600 to 1,000 bushels to the acre. Little trouble. No harvesting. No feeding. The Hogs will help themselves if allowed to do so. I have a limited quantity of seed to sell. Send for Circular giving full information to

J. H. F. GOFF,

San Felipe, Santa Clara County, Cal.

SAMUEL JELLY.

Watchmaker and Importer of Jewelry,

Watches, Diamond Work, Silverware, Etc., Etc.

No. 120 J Street, between Fourth and Fifth, South Side, SACRAMENTO, CAL.

Particular attention given to Manufacturing Jewelry, and Repairing Clocks, Watches, Jewelry, etc.

A FEW DEVONS AND GRADES

FOR SALE

Address R. McENESPIE, Chico, California

Much Obligated, Etc.

PORTLAND, OREGON, June 26th, 1877.

Dewey & Co., Patent Solicitors, S. F.—Gents: I am much obliged to you for courtesy shown me, and am much pleased with the manner in which you have done my business, and assure you, will cheerfully recommend you to my acquaintance needing such services. Hope to have a case again before long of my own. I have been an inventor all my life, but let others reap the benefit, or had work stolen from me. Please have the extra copies of my patent, etc., mailed to me direct, and oblige Yours truly, J. H. WOODRUM.

Agricultural Articles.

-- THE --

California Horse-Power

For Irrigating Purposes.
The best in the World.

No machinery,
and easily work-
ed. One horse
works two (2)
8-inch pumps,
raising water 50



feet with 5-foot stroke, at the rate of 12,000 gallons per hour. For particulars send for circulars.

Manufactured at the SACRAMENTO FOUNDRY, corner Front and N streets, Sacramento, Cal., by

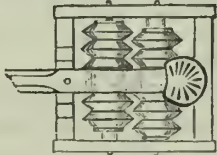
WM. GUTENBERG & CO.

FARMERS' FRIEND!

Patented

January 2d,

1878.



The Best

In the

State!

The Golden State Ground Roller

-- AND --

CLOD CRUSHER!

State Rights For Sale. Manufactured at the

SACRAMENTO FOUNDRY,

Corner of Front and N Streets, Sacramento, Cal., by

WM. GUTENBERG & CO.

The Famous "Enterprise,"

(PERKINS' PATENT

Self Regulating

WINDMILLS,

Pumps & Fixtures

These Mills and Pumps are
reliable and always give sat-
isfaction. Simple, strong and
durable in all parts. Solid
wrought iron crank shaft with
double bearings for the crank
to work in, all turned and
run in babitted boxes.

Positively self regulating,
with no coil spring or springs
of any kind. No little rods,
joints, levers or balls to get
out of order, as such things
do. Mills in use six to nine years in good order now, that
have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in
use. All warranted. Address for circulars and infor-
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HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES, LIVERMORE,

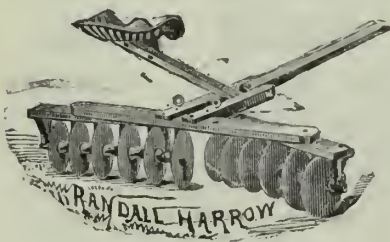
ALAMEDA CO., CAL. Also, Best Feed Mills for sale.

San Francisco Agency, LINFORTH, RICE

& CO., 401 Market Street.

The Randall Pulverizing Harrow.

A COMPLETE SUCCESS.



OVER 10,000 IN USE.

Local agents wanted. Descriptive circulars and Price
list free on application.

Address,

CLAUDE V. BURKE,

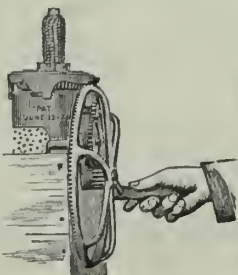
Yolo, Yolo County, Cal.

Sole Agent.

Peerless Corn Sheller

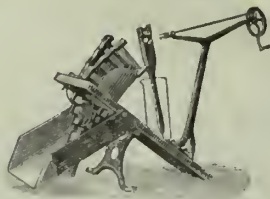
It is so cheap (cost-
ing only \$6), that al-
most any one can af-
ford to buy one. It is
so rapid, it will shell
almost as fast as a \$40
machine, and seven or
eight bushels per hour
is not above its capac-
ity. It weighs only 13
pounds and is simple
and durable. For par-
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WEISTER & CO.

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THOMAS'
IMPROVED APPLE PARER,
CORER AND SLICER.

Letters Patent No. 88,755.



This Machine is
durable, easily ad-
justed and kept in
order; does its work
complete; slices the
fruit of even thick-
ness; so prepared, it
dries evenly and
quickly, say in 36
hours, thus avoid-
ing a long exposure
to the miller or
moth producing the

worms. It does its work better and quicker than any other
machine. Boys and girls can use it with great facility; many
considering TWENTY BUSHELS a fair day's work,
while some have pared and sliced THIRTY BUSHELS in
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County rights for sale by

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Auburn, California.

MATTESON & WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW

Took the Premium over all at the great plowing Match
in Stockton, in 1870.

This Plow is thoroughly made by practical men who
have been long in the business and know what is required
in the construction of Gang Plows. It is quickly adjusted.
Sufficient play is given so that the tongue will pass over
cradle knolls without changing the working position of the
shares. It is so constructed that the wheels themselves
govern the action of the Plow correctly. It has various
points of superiority, and can be relied upon as the best
and most desirable Gang Plow in the world. Send for
circular to

MATTESON & WILLIAMSON,

STOCKTON, CAL.

F. ALTMAN'S



Foundry and Machine Shop.

Manufacturer of all kinds of Steam and Agricultural

Machinery.

GANG PLOWS A SPECIALTY.

Sheers and Mould Boards always on hand.

SAN JOSE, CAL.

CALIFORNIA

(Patent)

WINDMILL.

Self-Regulator.

This is the cheapest and best
Windmill in the country. Has
78 fans, 10 feet in diameter.

Price, \$75.

Every mill is warranted. Be-
fore you buy, send for a cir-
cular, giving full description to

BERRY & PLACE,

Market, head of Front street, SAN FRANCISCO, Cal.

THE BOSS PRUNER.

Patented January 8th, 1878.

ENTIRELY NEW!

Works on a cog principle. Smallest size cuts one inch,
and largest size two inches in diameter. Has been thor-
oughly tested, and given perfect satisfaction. Sold by

GEORGE LARKIN,

Newcastle, Placer County, California.

THEOPHILE PINARD,

Alameda Carriage Factory,

SAN JOSE, CAL.



Blacksmithing of all kinds Neatly
and Promptly done.

Horseshoeing a Specialty.

Chance in the Nursery Business.

There is a good chance in Tehama County for a skilled
man who will go to work and start a nursery. The loca-
tion is one mile from Vina station, in Tehama County, in
a good growing region of country; the land is first-class
and water abundant. A man is wanted, with good refer-
ences, who will start a first-class nursery in partnership
with the owner of the land. Address,

S. C. DICUS,

Vina Station, Tehama County, Cal.

Sacramento City.

Sacramento, the capital city of California, is centrally
located to the great and rich agricultural and mining fields
of the State. It is the second city in trade and importance
on the western side of the continent. Sacramentans through-
out the history of California have honorably competed for a
fair share of trade, and are well noted for their indomitable
enterprise in establishing and perpetuating the growth, sub-
stantial improvement and good reputation of their CAPITAL
CITY.

PACIFIC WATER CURE

-- AND --

ECLECTIC HEALTH INSTITUTE,

Northwest corner of Seventh and I Streets,

SACRAMENTO, CAL.

M. F. CLAYTON, M. D., PROPRIETOR.

This Institution has been favorably known to the public
as a Water Cure for nearly twenty years. At the beginning
of last year it passed into the hands of the present proprietor,
who has thoroughly renovated, fitted it up and furnished it
with all the modern improvements and apparatus for the
treatment of diseases and deformity to which the human
flesh is heir. Chronic diseases receive special attention, such
as premonitory Consumption, Catarrh, Brouchitis, Rheuma-
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Attorneys for Land Claimants.

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LUMPS, and all old sores, apply freely so as to blister,
from three to five days in succession, and in four or five
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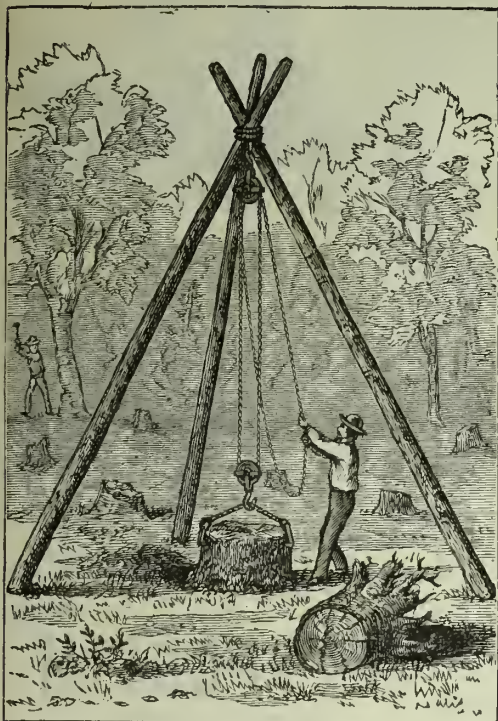
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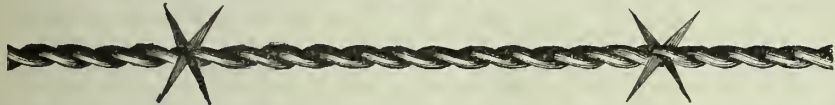
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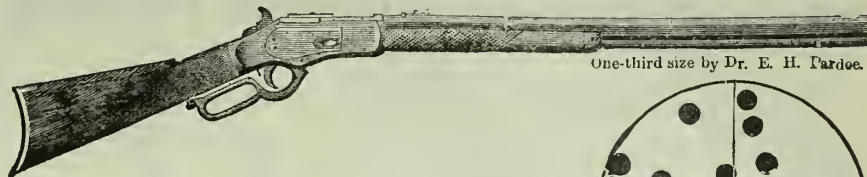
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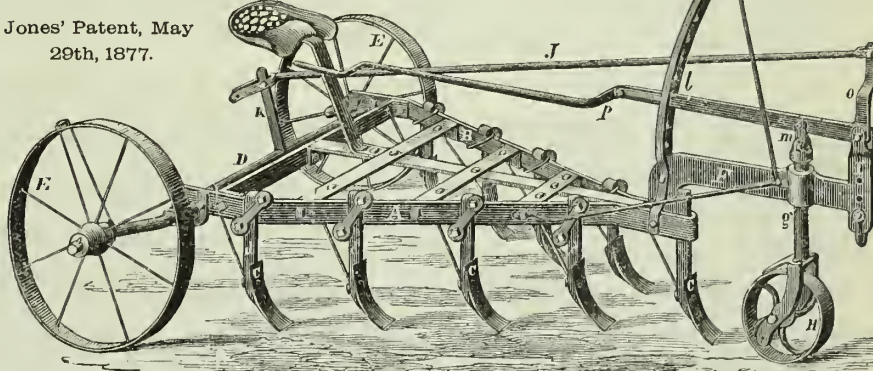
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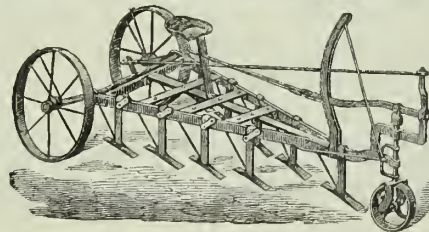
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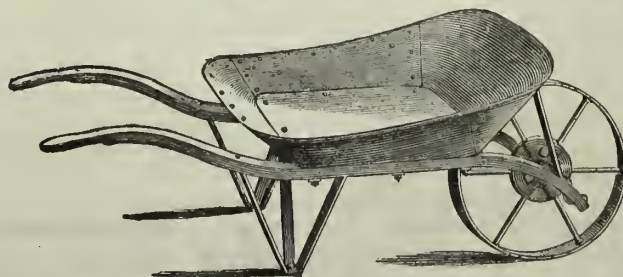
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of the best cast steel, with an
improved method of fasten-
ing to the standard, approach-
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Schooners make the trip to Drake's Bay in six hours, and to Tomales Bay in nine hours. Produce can be shipped to market from the colony by schooner as well as by rail.

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TERMS—One-fourth cash; balance in one, two and three years, with interest at eight per cent. per annum on deferred payments.

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Parties desiring to visit the tract will be provided with tickets upon application as above

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direct from the original stock.

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Corner First and San Fernando Sts., SAN JOSE, Cal.

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\$1.50 to \$2 per day. \$3 to \$10 per week. Carriage attends all trains.



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Pure Bone Meal, Superphosphate, Animal Fertilizers.

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In order to introduce our fertilizers, and to prove that we are using nothing but pure materials, and being positive that when properly used they will double the yields of most crops, and at the same time enrich the soil, we are willing to furnish small lots, of 100 pounds and upwards, at low prices.

For Circulars, giving information concerning the use of the fertilizers on different crops, apply to or address the Company's office, No. 21 Sansome Street, San Francisco.

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100 Embossed pictures for decorating pottery, vases, etc., 15c. 100 large Decalcomanies or Transfer Pictures, fifty varieties, 15c. Both for 25 cts. Postage stamps taken. Catalogue and 25 floral cards free with every order. CURTIS & CO., 295 Broadway, New York.

C. & F. NAUMAN & CO.,

231 Washington St., San Francisco,

Produce Commission Merchants.

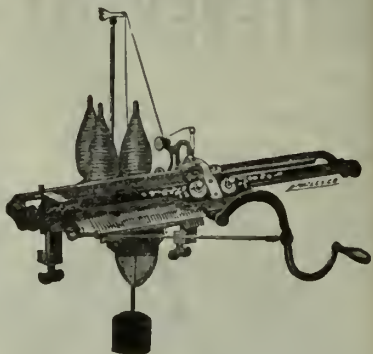
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On which the highest market rates will be returned.

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IT IS THE ONLY MACHINE

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Manufacturers of knitted goods and dealer in woolen yarns.
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103 Third Street, S. F.

Has just received a large assortment of the latest style goods.

Suits to order from.....\$20

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The leading question is where the best goods can be found at the lowest prices. The answer is at

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Samples and Rules for Self-measurement sent free to any address. Fit guaranteed.

FOR SINGING CLASSES.

GNWARD! (75 cents, \$7.50 per dozen. By L. O. EWERSON, and is the author's last and perhaps best compilation for Singing Schools. Fine instructions, abundant exercises, many Glee and Songs, and a good quantity of Sacred Music.

Johnson's Method for Singing Classes, (60 cts. or \$6 per dozen) for Singing Schools, has remarkably clear instructions, and a large quantity of pleasing Sacred and Secular Music for practice.

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Grammar School Choir, (60 cts. or \$6 per dozen.) By W. S. TILDEN, is an exceedingly well constructed book for the Singing Classes in Grammar Schools, (the higher classes), and for the younger classes of High Schools.

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Any book mailed post free for Retail Price.

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And the best stock of

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In San Francisco.

Ranch Wanted.

Wanted to lease, with a view to purchase as a permanent home,

A Poultry, Grain or Hog Ranch, in some good business locality. A southern and healthy location preferred, say in Ventura, Los Angeles or San Bernardino counties. The location will depend upon opportunities offered. Address TEXANT, care DEWEY & CO., San Francisco.

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Volume XVI.]

SAN FRANCISCO, SATURDAY, NOVEMBER 16, 1878.

Number 20.

The Panama Route from New York.

All those who came to this coast by what is known as the Panama route will have a vivid recollection of Aspinwall, as giving them their first views of tropical surroundings. The town, of which we give a view herewith, is on the north side of the Isthmus of Panama, on Navy bay, 48 miles by rail from Panama. The harbor is a good one, and has ample shipping facilities. There are several fine wharves, each owned and used by one of the following steamship lines: The Pacific Mail Co., to New York and San Francisco; Royal Mail line running to Southampton; West India line, plying between Aspinwall and Liverpool, touching at the principal West Indian islands; the Atlas line to Liverpool via New York; the French line to France, and the German line to Bremen. Most

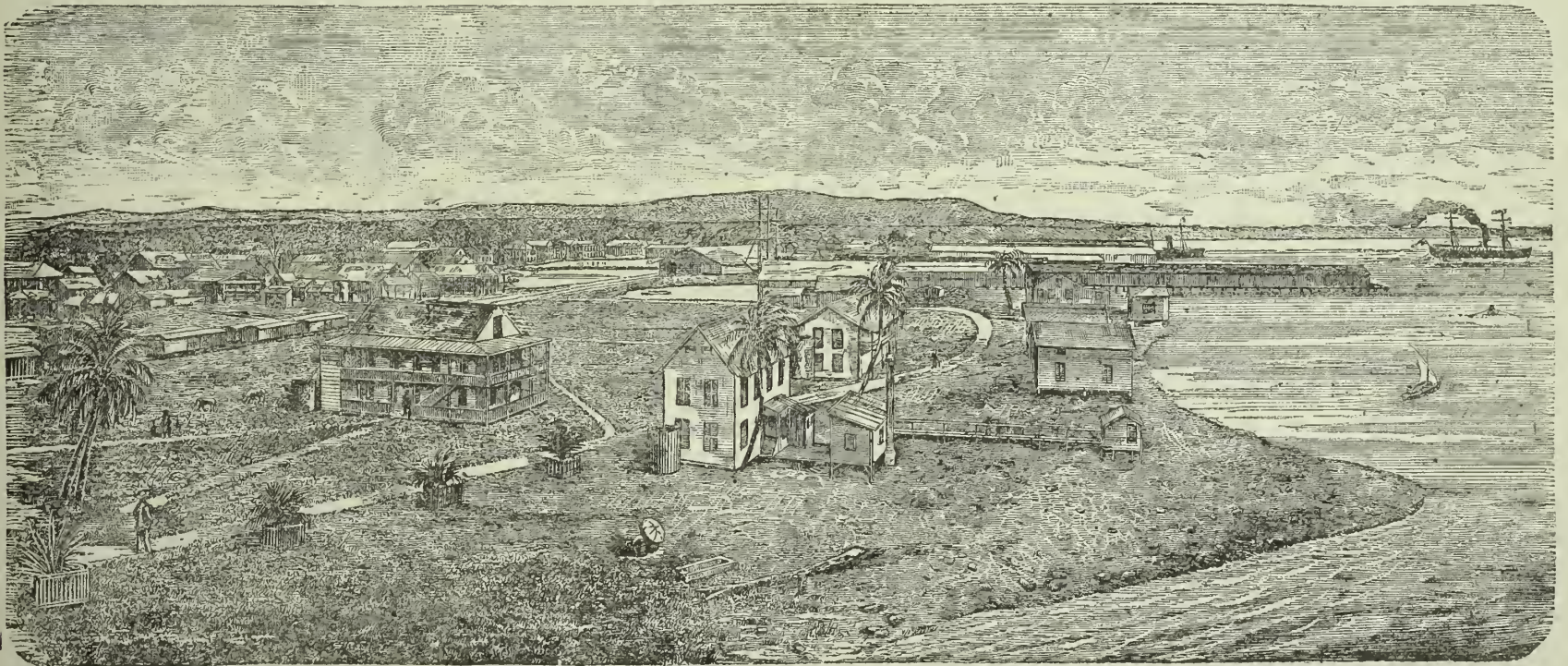
known transportation company in the world, and for many years, before the Pacific railroad was built, brought by far the largest proportion of people to this coast, comparatively few coming overland or around Cape Horn. Even now, with the railroads to compete with it, such are the accommodations offered, that large numbers of passengers travel to and fro by the Mail steamers, preferring a comfortable ocean passage to the crowded and dusty cars. The steamers are commodious, well managed and comfortable, and the fare and appointments being first-class, make the voyage of 5,200 miles a pleasanter one than the shorter trip across the continent by rail. The steamers connect at Panama with the Pacific Steam Navigation Co.'s lines to all the important ports of South America. At Aspinwall connection is made with the various lines previously enu-

trouble to make a very full and interesting set, so that when bound together the whole is a sort of illustrated description of the country and people.

PACIFIC COAST BLOOD HORSE ASSOCIATION.—An organization was effected in this city, Nov. 1st, among those who believe in the elevation of turf sports, and in the encouragement of breeding thoroughbred animals. It is believed by the leading owners of thoroughbred racing stock, that by organizing among themselves, and acquiring power thereby, they can render impossible many of the gross frauds and abuses which have brought turf sports into great disrepute. The object is certainly a praiseworthy one, for we know few institutions which more need genuine reform. There is much in speed contests that is of general interest and value,

Big Trees in Australia.

Appropriate to the discussion of the giant *sequoias* of our State, which we gave in our last issue, come some facts concerning the big trees of Australia. These facts contain not only a gossip interest to us, but a direct one, because the trees of which Australia is proud are the eucalyptus family, which we are now growing in such large numbers. In the last issue of the *Illustrated Australia News* is an engraving of the base of one of these mammoths, and this the *News* claims is the largest tree in the world, as appears in the following paragraph which we quote: "There are specimens of eucalyptus or gum tree that have been met with occasionally that nearly equaled the dimensions of the American giants. Some of these, of the species known as the blue gum, have been found on the



VIEW OF ASPINWALL, SHOWING RAILROAD TERMINUS AND PACIFIC MAIL STEAMSHIP WHARVES.

of these different lines dispatch steamers twice a month.

The permanent population of Aspinwall is only about 2,500, the white population fluctuating according to the demands of business.

The busiest part of Aspinwall, and in fact, the only part where any business of importance is transacted, is along the water front. The Pacific Mail Steamship Co. built a wharf there some years ago, which cost upwards of \$800,000. It is a magnificent piece of work, 600 feet long and covered the entire length with a substantial roofing, in which merchandise is stored when awaiting transfer across the isthmus. At this wharf the steamers of the line land their freight and passengers.

Among the buildings of interest at Aspinwall is the Episcopal church erected about 20 years ago, through the liberality of the Pacific Mail Steamship Co. and the Panama Railroad Co. It is constructed of stone and very handsomely and substantially fitted up. Near the church is a monument erected to the memory of Aspinwall, Stephens and other friends of the great isthmus route.

The place is best known of course as the landing on the Atlantic side for the Pacific Mail steamers. This is probably the best

erated. The main office of the Pacific Mail Co. is at No. 6 Bowling Green, New York, and D. S. Babcock, Esq., is President. The General Agents of the Pacific coast are Williams, Blanchard & Co., the offices, wharves, etc., being at the foot of First street, corner of Brannan, in this city.

The trip up or down on the Pacific side is the pleasantest ocean voyage in the world. Glassy seas and sunny skies are the rule. The steamers keep close along the coast, affording the passengers occasional views of tropical scenery and life, as at Acapulco and elsewhere. The vessels in use are all first-class specimens of naval architecture, complete in their appointments, and all possible conveniences are afforded the passengers. The land passage of the isthmus is divested of all discomforts by the railroad, the trip from Panama to Aspinwall occupying a very short time. Our view of Aspinwall, showing the wharf of the Mail Company, is from a photograph by Muybridge, taken not long since. This well-known photographer has made a most complete set of views of Central American scenery, showing all the prominent features and places of the country, with characteristic views of the natives in their various occupations. He has taken the

but of late this has been so obscured by gamblers' tricks and devices, that races have often decided nothing but the transfer of wagered money. This we hope the Pacific Coast Blood Horse Association may overcome. The meeting for organization was well attended. The Board of Trustees are: E. J. Baldwin, President; Theodore Winters, 1st Vice-President; Caleb Dorsey, 2d Vice-President; Leland Stanford, Jas. M. McShaffer, John M. Coghlan, Henry Schwartz, Bank of California, Treasurer; Joseph Cairn Simpson, Secretary, Oakland, Cal. Our readers will notice that Mr. Simpson renews his article on the "Breeding of Horses in California," in another column. The practical points of the question are to be presented forthwith.

SECRETARY SCHURZ, has decided that no portion of the money appropriated by Congress for public surveys, during the present year, can be used for tracing former surveys in the field, to aid the investigation of depredations upon public timber lands, etc.

ACCORDING to the new Constitution, the Governor shall receive \$6,000 per annum, and the other State officers each \$3,000, which shall be in full for all services rendered in any capacity.

slopes of Mt. Wellington, and in the Huon district in Tasmania, and others, of a different kind, have been noticed in Gippsland. Our illustration gives a fair representation of a tree which is undoubtedly the largest in the world. It is of the kind known as the eucalyptus amygdalina, or almond-leaved gum, which is common in the districts of Dandenong, Berwick and parts of Gippsland. It is not found in elevated positions, but prefers level ground, and where met with in groves it is found of immense proportions, and the butts run up to a tremendous height before a branch is thrown out. The specimen represented grew at Fernshaw, in the Dandenong district, and is 380 feet to the first branches, 430 feet to the top, and has a girth of from 50 to 60 feet at a short distance above the ground."

SENOR CASTELAR, of the Spanish Cortes, in opposing a modification of the suffrage law, defends universal suffrage, and advocates a liberal democratic policy which would allow the true will of the nation to be made known.

THE expenditures for 1879 are estimated in the Austro-Hungarian budget, at 94,551,715 florins—3,000,000 less than the preceding budget.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eps.

The Southern California Horticultural Society's Fair.

EDITORS PRESS:—The 14th of October, 1878, is now one of our days of reference, because it was the opening day of the first annual fair of the Horticultural society of Southern California. In the evening of the 14th the new pavilion was brilliant with the multitudes of well distributed gas-jets, and almost boisterously merry with happy thousands from the city and the rural districts. The arrival of the hour for the formal opening of the fair was signaled, by a burst of thrilling music by Prof. Wangeman's band.

At 8 o'clock the vast assemblage was called to order by Mr. J. DeBarth Shorb, President of the society, who pleasantly rounded off the call with some remarks, timely and brief, and then introduced his brother, Dr. J. Campbell Shorb, of San Francisco, the orator of the evening. He sustained himself remarkably through an oration an hour and a quarter long. The orator at all times commanded the silent attention of a large area of the densely massed assemblage.

A excellent poem composed expressly for the occasion by Mr. Kerecheval, at the invitation of the society, was effectively read by Mr. S. H. Butterfield. On Wednesday evening of the fair, Prof. E. S. Carr, the orator of the evening, was introduced and delivered an oration on the subject, "Nature and Art." Prof. Carr preserved entire serenity throughout the delivery of his address and was listened to with profound attention by a large proportion of the multitude in the pavilion. The speakers ought not to feel that a want of respect is that to which is due the irrepressible confusion that prevailed in the pavilion on the occasion referred to, but something ought to be done on behalf of the orator and those who wish to hear the oration, and also those who prefer promenading and sight seeing. An auditorium might be added so as to combine adaption to certain purposes of the exhibition. Special adaption to the purposes of an auditorium but without adaption to the purposes of sight-seeing and promenading at the particular time it is occupied as an auditorium.

California Manufactures.

One of the most cheering features of the fair was the highly creditable display of the products of the workshops of California. The quality of the home products was such as to satisfy the State pride of the most critical and ambitious Californian; but the variety was insignificant. It is a fact to be lamented that while the manufacturer has a broader margin of profit in California than in any other State, not on the Pacific coast, it is also true that California falls in with the improvident cotton States in depending on the workshops of other regions. The practice of the cotton States is less suicidal than that of California by the difference of freight against California. And as the cotton States, whose annual income has been for a generation, and still is, about a quarter of a billion, do nevertheless stay poor, so does California succumb to hard times and stays comparatively poor notwithstanding her bonanzas in the mine and bonanzas in the farm. And now that the cotton States and California have enriched all the world more than themselves it is high time for the era of introversion. And as the cotton States are inaugurating a new era by manufacturing raw cotton where it grows, and are amazed at the large dividends paid by her cotton factories, and are vexed with themselves because of their self-imposed dependence on the workshops abroad, so let California inaugurate a new era; an era of supplementary bonanzas by establishing manufactories from one end of the State to the other.

The cotton States have attained the highest eminence possible in the widest range of financial folly by paying public carriers to take their cotton to New England or across the ocean, and to bring it back to them, excepting always the supertranscendent folly of California in paying public carriers for transporting her wool 2,000 miles farther away and 2,000 miles farther back again. The folly of California exceeds the folly of the cotton States by an average of about 4,000 miles.

At our fair there was on exhibition not one solitary yard of woolen cloth, woolen shawl or blanket manufactured in California. In a few departments at our fair the Californian mechanic came to the rescue. Page & Gravel, of Los Angeles, made and exhibited a one-horse family carriage, a rare combination of lightness, strength, room and elegance. The front seat turned on a pivot. L. Lichtenberger, of Los Angeles, made and exhibited a two-horse family carriage highly finished in every detail. The design was above criticism. Louis Roeder, of Los Angeles, made and exhibited an open buggy, a perfect gem. Rees & Wirshing, of Los Angeles, made and exhibited an open two-seated family carriage of good design and well executed; also a farm wagon. McGarvin & White, of Los Angeles, made and exhibited an elegant open buggy. Mr. Schmidt, of Los Angeles, made and exhibited a hunting and traveling carriage, well adapted to the purpose indicated by the name. S. W. Luitweller, of Los Angeles, made and exhibited a very superior

two-horse family carriage. B. Grues & Co., of San Francisco, exhibited an Oppenheim buggy which has been described and illustrated in the PRESS.

A. J. Robinson, of Stockton, exhibited a superior farm wagon. Mr. H. Heinisch, of Los Angeles, manufactured and exhibited harness of exquisite finish. E. K. Green, of Los Angeles, invented and exhibited a one-horse cultivator, said to possess merit. Holly & Jones, of Lakeville, Sonoma county, Cal., made and exhibited a two-horse cultivator that was favorably criticised by the admiring farmers. Farrell & Hartley, of San Diego, made and exhibited excellent leather. George Stone, of Los Angeles, made and exhibited a superb assortment of ladies' and gentlemen's boots and shoes. Barrows, Furry & Co., of Los Angeles, made a fine display of copper and brass work, plumbers' goods, cooking range and a variety of other goods, many of which were of their own manufacture. M. W. Childs, of Los Angeles, made an attractive display of unbleached-iron portable ranges, hollow-ware, cooking and parlor stoves, kitchen furniture, etc., many of which were manufactured in their shop. A. J. Robinson, of Stockton, exhibited barbed wire fencing. The Los Angeles Soap Co. made a decidedly fine display. Foster, Howard & Co., of Los Angeles, in their display seemed to have exhausted the catalogue of the stores for every kind of painting. Dotter & Bradley's magnificent and splendid display of furniture and carpets challenged universal attention. The parlor organs, with bell accompaniment, exhibited by the Los Angeles Furniture Co. were the center of admiring multitudes all through the fair.

Sub-Earth Irrigation.

The Asbestos Stone Co. of Los Angeles compelled multitudes to admire the beautiful designs of architectural figures in artificial stone, embracing the ornamental and the useful. This company, a fixed manufacturing institution of Los Angeles, illustrated before wondering thousands a plan of sub-irrigation, that will give to one gallon of water the irrigating capacity of ten gallons under the system now prevalent. The water is conveyed from the reservoir or stream through pipes of artificial stone. Provisions are made for regulating the administration of water to a nicety. One may turn the water on, and so time it that the manpower may vanish in the day or sleep at night, to return at the appointed future hour to find the task assigned to the automatic irrigator accurately executed. No water flows on the surface, hence no hardening, no weeds and less root disturbing soil vexing. This system of sub-irrigation quickened into existence on arid mesa land, in East Los Angeles, luscious monster mountain sprout watermelons. The same system, on the same kind of arid high land, is leading, or rather propelling, orange trees along a highly prosperous career. Some of the melons thus decoyed out of an unpromising spot were on exhibition at the fair, the sweet testimonies of a valuable system of irrigation.

This marshaling of nectarine testimony springs in vivid reminiscences of being one of a company, consisting of an assortment of farmers, merchants, lawyers, doctors and other connoisseurs, who did not finish one of the aforesaid mammoth mountain sprouts, until reinforced by some more farmers, merchants, lawyers and doctors. If this system of sub-irrigation, thus contracting the consumption of water, does not expand the future of California, then those sub-irrigated orange trees on the arid mesa, waxed arborescent only in a dream, and those mountain sprouts sprouted and barreled out only in hallucination.

With possibly one or two exceptions, every exhibitor mentioned thus far was awarded one or more premiums. Facts of soil products may more easily come into the next letter.

JOHN H. SHIELDS.

Florence, Los Angeles county, Cal.

The Foothills West of San Jose.

EDITORS PRESS:—Amongst the foothills of the State, many places of rare beauty may be found; but far surpassing in climate, scenery and soil any foothill spot I ever trod or gazed upon, is the country lying west of San Jose, amidst the hills between Los Gatos and Saratoga. Nature's artist has indeed been there and left the imprint of her magic pencil on all the surroundings. Recently I stood upon the porch of the Los Gatos hotel lost in admiration of the beauties around me, and at the peaceful attitude of the nestling town. The pure air laden with the music of a thousand songsters, glided gently down the slopes and imparted to my system a thrilling vigor I had not felt for years. Indeed it is a spot of royal attractiveness, where Nature's munificent gifts have been showered with rare liberality—a spot adapted for pleasant, healthful homes, where happiness should reign supreme. The climate, of even regularity and invigorating power, possesses a wonderful property of curing in a remarkably short time slight affections of the bronchial tubes, and asthmatics badly afflicted are relieved instantaneously and entirely cured in a brief period.

Here can be grown successfully, the fruits of the world, almost. A visit to the experimental orchard of Dr. McMurtry convinced me of this. It was the doctor who first demonstrated that the orange would thrive in this climate. In his orchard of not more than an acre and a half or two acres in size, can be found a large variety

of choice fruits, among which may be mentioned as being particularly adapted to the climate, the orange, lemon, lime, fig, date, persimmon, almond, walnut, chestnut and hickory nut. The surrounding localities are much indebted to Dr. McMurtry for his interesting and successful experiments.

Laying Out an Almond Orchard.

I called also on Mr. Mason, of Los Gatos, who has a 20-acre orchard of nut trees. From 500 4-year-olds, he has this season gathered 3,000 lbs of almonds, an excellent showing for such young trees. Mr. Mason has 150 trees planted to the acre and the method employed by him in setting them out was novel to me and may perhaps be so to some of your readers. At each end and side of the orchard he nailed marks equal distances apart, then starting with a double team (plow attached) from mark No. 1 at one end, he went straight to mark No. 1 at the other. Returning, he drove one horse in the furrow already made, back again to the starting point. Thus he had a double furrow. This he repeated from end to end and from side to side until the field presented the appearance of a checker board. Then with the assistance of two men he dug in each double furrow at the crossings a hole one foot deep and at the bottom he loosened the soil with a pronged shovel. He then planted his trees and in this manner he was enabled to set out the whole number, 3,000, in the space of six weeks, and I doubt if another orchard can be found to excel the regularity of its appearance. Mr. M.'s trees were all yearlings and he claims it to be dangerous to transplant older trees on account of the tap roots, which are not to be handled with impunity.

About midway between Los Gatos and Saratoga lies the beautiful orchard of Mrs. Shoemaker, which produces as fine fruits as I ever tasted. I never saw so large a variety of trees bearing in such profusion fruits of rare flavor. I saw one tree freighted with bellflowers, a limb of which, four inches in diameter, had been snapped completely off by the weight of the fruit. This tree could not have borne less than 5,000 apples this season. Excellent raisins are made here; fruits dried and wine and cider manufactured. With all the known facilities for handling fruits, the orchard presents a beautiful picture of prosperity.

Anyone can come here with a few hundred dollars and plenty of intelligent industry, and in the course of a few years can have as fine an orchard as has Mrs. S. Land is comparatively cheap, ranging from \$20 to \$50 per acre. Cereals and green crops are raised as well as fruits, and there is a market within easy reach for all that can be raised.

C. F. T.

San Francisco.

Artesian Wells in San Joaquin Valley.

EDITORS PRESS:—You have requested me to send such items as can be gathered in this part of the State on artesian wells, a topic of interest and profit now throughout California. Your very valuable articles lately on such wells in San Francisco have been quite a surprise to many of your readers. Few outside of the city knew that a single flowing well had been obtained within its limits, and now, since they learn through your useful sketches and illustrations, that many fine flowing wells already exist there at less depths than 200 feet, while others bring pure, soft water near the surface, thousands in the country who like to see justice done, are rejoicing with your citizens that a means has at last been found to make a grasping water monopoly more reasonable in its demands. In this, as in many other instances, dame Nature has been kinder to the people of California than many of her own citizens have been.

I regret to report that while many large flowing wells have already been obtained in Merced county, along the Merced and San Joaquin rivers, Bear creek, the Mariposa and Chowchilla, at depths usually less than 300 feet, as already mentioned in your columns, but little has been done in this direction in Tulare and Fresno counties.

The fine flowing well, eight inches in diameter, bored lately by the railroad company on its lands near Tipton, about 300 feet deep and with a flow of some 80,000 gallons every 24 hours, and three with a small flow of water near Lemoore, are the only ones I can hear of in all this region. I may mention in this connection that the first flowing well between the Merced and Tolueme rivers has lately been bored near Turlock, my old home, at a point between there and Hill's Ferry, a few miles east of the Joaquin and north of the Merced. I have not been able, as yet, to procure farther facts than that a fine flow of good water was obtained there at a depth between 300 and 400 feet.

Here I shall give your readers such items as I have secured about

Three Flowing Wells on One Ranch

Near Lemoore—the only ones in all this Mussel Slough country. They have been bored during the last four years on the fine stock ranch of John R. Heinlen, about a mile west of town.

One near his dwelling, used for household purposes, is 150 feet deep, and commenced flowing at about 85 feet, with little or no increase in flow at greater depths. A second one, near his slaughter house and railroad switch, is 200 feet deep and began flowing at about 90 feet. The third in his pasture about a quarter of a

mile northwest of the first, is 400 feet deep and began flowing at 150 feet. The latter is a seven-inch bore, the others smaller.

The water in all is soft, and pleasant drinking water, varying in temperature from 68° to 72° Fahr. The flow from each is small, but Mr. Heinlen informs me that the amount is steadily increasing in the deeper well.

The Strata Passed Through

In the 150-foot well were as follows: 1, surface soil, 14 feet; 2, sand, 10 feet; 3, blue clay, 60 feet; 4, gray sandstone, 6 or 8 inches. After passing the latter, a small flow was obtained. Then they bored alternately through sand and clay, varying in thickness from 2 to 5 feet.

In the 400-foot well the boring was almost all through sand. This gave much trouble, as the bore was constantly filling up. So much pumping had to be done that Mr. H. informs me there was about 2,000 feet of work done to gain the depth of 400 feet.

Wells near Hanford.

Plans are now being discussed for testing the depth at which artesian water can be had near Hanford. It is proposed for several neighbors to make up a purse to bore a well on the place of some one of them—not a railroad quarter. If unsuccessful, the loss will be borne in common; if successful, the owner of the land will pay the expenses. In view of what has already been developed so far by all attempts in San Joaquin valley, it is, no doubt, safe to assume that there is

An Artesian Belt.

Extending from 5 to 10 miles or more east of lower Kern river, Tulare lake, lower King's river, Fish slough, Fresno slough and the San Joaquin river, say for some 300 miles along this line of drainage, where flowing wells can be obtained at depths varying from 100 feet or less to 400 feet, in most localities; especially near all water-courses.

This belt may extend a short distance west of the same water line, as well as throughout Sacramento valley, within similar limits east and west of Sacramento river. As a general rule, the farther east of this belt you go, the deeper you have to bore for flowing wells.

Certainly the many successes the past year in securing the best of flowing wells will be a great stimulus to testing the matter thoroughly within the next year or two, along the entire artesian belt here indicated, as well as in our coast counties.

J. W. A. WRIGHT.

Hanford, Oct. 29th, 1878.

THE STABLE.

Breeding Horses in California.—No. 8.

[Written for the PRESS by JOSEPH CAIRN SIMPSON.]

The break in these articles from August 3d has been caused by a press of work entailed by the fairs, but now that these are past the author hopes to finish the series without further delay. The last article gave a list of the stallions thoroughbred in California, and a partial one of the mares. The blood of many of these is as good as there is in any country, and the combination of that blood gives the opportunity to rear animals which will vie with those of Kentucky and the East. Since the former papers were published the California bred horses have proven that the predictions that such would be the case have been fully verified, and two of the best races on record have been added to the long list of meritorious performances of horses bred on the Pacific coast. The blood of the celebrities of the East and here, and the study of the strains which have been combined in the breeding of these victorious animals, will be of benefit to those who are engaged in the business. It will not be necessary to consider others than those which are now celebrated, and a few of the best of them will answer the requirements. In the East the three-year-olds which have shown the best are Duke of Magenta, Bramble, Spartan, Himyar, Day Star and Leveller. Here we have Lottery, Mark L. and Clara D., with Lexington Belle, Raven and Glenita not far behind. Duke of Magenta is acknowledged to be the first of the Orient, while Lottery a majority concede to be the best on this coast. The Duke is by Lexington, out of Magenta by imported Yorkshire; Spartan, by Lexington, out of Lula Horton by imported Albion; Bramble, by imported Bonnie Scotland, out of Ivy Leaf by Australian; Himyar, by Alarm, out of Hira by Lexington; Day Star, by Star Davis, out of Squeeze-em by Lexington; and Leveller, by Lever, out of Sly-Boots by Rivoli, a half sister to the dam of Day Star. Lottery and Mark L., bred in California, are by Monday, the dam of Lottery being Virginia by Revenue; the dam of Mark L., Jennie C. by Norfolk, her dam, Virginia. Clara D. is by imported Glenelg, her dam a sister to Norfolk. The Eastern cracks are mainly descendants of Lexington, and all of the California celebrities have more or less of his blood. Mark L. is a double Lexington, as his sire is a grandson, his dam, a granddaughter of that famous horse. But there is a quadruple strain of Glenelg blood, two through his sire and two through his dam. Lottery has also a triple cross, as the dam of Virginia was Corinne by Glenelg. Mark L. has therefore one-quarter of Lexington blood, one-eighth of Glenelg, and this "nick," which has been proven to be so

fortunate in the first generation, shows the same potency when further removed.

But there is one point I desire to call especial attention to, and that is, in every one of those celebrities the strains for several generations are the most fashionable of the period. Thus in the pedigree of the Duke of Magenta, in addition to the Lexington, Yorkshire and Glencoe, there are the strains of imported Luzborough: Sir Charles and Director, with a disputed cross, Duroc or Brimmer. As the last named was celebrated for getting horses of great speed, and the blood is found in several others of the celebrities, it may be that this "quarter-horse cross" has something to do with the excellence, and is not such a reproach as many think. Still I would much prefer a pedigree that could not be questioned; and though a great majority of this family have been first-class race-horses, "the flaw" is an annoyance to be avoided if possible. The grandam of the Duke produced Magenta, Mamona, Prairie Boy, Merrill, Marion, and Hollywood. Magenta had the fastest two miles to her credit up to her day, and Mamona the fastest mile. All these named were first-class horses, and among the seventeen foals which Miriam had are others which have been distinguished. Magenta was the dam of Larkin, Blinkiron, Queen Victoria, etc.; Larkin and Queen Victoria were brother and sister to Duke of Magenta, Blinkiron by Bonnie Scotland. I owned Blinkiron, and can safely assert that he was one of the best race-horses I ever saw.

The disputed cross is in the sixth generation from the present celebrity; but as we do not find a parallel case in the Stud Book, it is a just inference that the breeding of the Brimmer horse was better than represented. This is close in-breeding to Sir Archy, Sir Charles and Director being by the "patriarch of the American Turf," Lexington in direct descent from him, on the side of his sire, with another strain of the same blood through his dam.

That in-breeding is not the bugaboo many have claimed it to be, but, to the contrary, that it is beneficial, there is abundant testimony in the Racing Calendar and the Stud Book. Some of the very best animals have been closely in-bred. The dam of Fashion (universally conceded to be the best mare ever bred in America) was by Sir Charles; her dam Reality, by Sir Archy.

Geo. Martin was bred in the same way. Flirtilla, Jr., was by Sir Archy, her dam also by Sir Archy, and Virginia Lafayette was the result of the like incestuous union. The great argument which the opponents of in-breeding present is the success of English horses on American mares, and the happy result which has followed the union of Lexington with imported mares, and those by imported horses. It is quite as likely a reason that the supremacy of those bred in this way has arisen from superiority in the animals themselves, arising from greater size, better form and more care in the breeding and rearing. With the exception of Lexington the native sires have been inferior to the imported, and when the records of this season are collated there will still be a large credit to those of foreign blood.

There is another point which is of the utmost importance in breeding race-horses and which will come second to the union of the strains which have proven to be the best for the race course. That is careful selection of form. There have been many failures when the blood of both parents was of the best, but this was rendered nugatory by faults in the formation, sire and dam, perhaps, possessing the same defects. In-breeding intensifies peculiarities. It fixes family characteristics, and when these are of the desired kind the result is satisfactory. But what may be only a trifling deficiency in either parent, the offspring will display in a magnified form, and hence the care, when coupling near relatives, must be exercised with double vigilance. Thus one parent may have faulty conformation and an outcross overcomes it; but slight malformation, both being of the same pre-dominating strains, will be more than likely to produce offspring with the tendency so much exaggerated as to result in something akin to deformity.

My advice to the persons engaged in breeding thoroughbreds, those breeding for the race-course, is, in the first place, to get mares of the very best stamp, combining the proper strains of blood, form and as much size as can be procured with the other desired qualities. One first-class mare is better than half a dozen not quite so good, and though she may cost more money than the six, when the balance is struck it will be found that the profit is ten times greater. The tenability of this position can be demonstrated by the Stud Books, and Racing Calendar. It was estimated that the ownership of Penelope was worth half a million of dollars to the Duke of Grafton, and the noted thoroughbred mares of England and America have been fortunes to their owners. Hundreds have never paid for the feed they eat. With good mares, stunted to a proper stallion, the breeding of thoroughbreds in California cannot fail to be a profitable business, provided due care is taken of them.

In the next paper I will endeavor to portray just how the mares should be treated from the time they are stunted until the foal is weaned, and with further hints regarding the choice of the stallion. A great deal in the previous papers has been theory; in the succeeding numbers the practice of those who have been the most successful will be the base, and practice which has proven correct is a safe guide.

[To be Continued.]

Horse Markets.

EDITORS PRESS:—It often occurs to me that a market for horses would be a great convenience to purchasers, and a benefit to those having horses for sale. My present occupation brings me almost daily in contact with both parties, those who wish to purchase, and those having spare horses to sell, and still the State so far as I know, has no stated place for sale or purchase of that most useful animal, the horse. Europe could teach as a lesson on that question. Many a time I have visited the "horse market," held generally in the principal city or town of a shire (answering the boundary of our counties), and a grand sight it was to witness hundreds of horses arranged in proper order for inspection. All purchasers could be suited, from those desiring the gayest carriage to the poorest cart-horse. Every condition of horse flesh seemed represented, and the price corresponded with actual conditions. It has been a matter of surprise to me, that some such a convenience was not inaugurated in these United States, for I know not of any State which has adopted the market system for horses.

In Massachusetts I believe there is a cattle market held at stated times at Brighton, and that the experiment has grown into large proportions. If so, do you suppose the sellers and purchasers would or could be induced to abandon the business? The convenience to all parties concerned would insure its continuance. And so it would be if a horse market were established in every county of the State. Modesto, Merced, San Jose and 20 other points are well adapted for such a purpose. Farmers require horses for plowing; therefore a fall market would supply all wants. Also a meeting in the spring would be in order to meet the demand. Horses die as well as other animals. To replace them is sometimes a great inconvenience, but a public market would supply the demand, and make public those who make horse-raising a business.

I merely touch upon the merits of this subject, hoping those immediately interested will inaugurate some system, whereby buyers and sellers may come intelligently together.

JOHN TAYLOR.
Mount Pleasant, October 20th, 1878.

THE APIARY.

The Influence of the Queen on Swarming.

EDITORS PRESS:—I saw lately, at an association of beekeepers in the East, a question was put to the convention that was not answered, and was called knotty. The question was: What influence, if any, the queen has in the swarming of the bees? Other beekeepers more competent than I have answered the question; but that was some time ago, and to-day not all beekeepers are satisfied with their answers, and to keep up with science and new developments in apia-culture, we will try to say something on that most important question. It is important, for if bees are allowed to swarm when they have the inclination there is no profit to their owner.

First, we shall take the ground that the queen has no influence on the bees swarming at all. Then, why do they swarm? For years our most able authors on apiculture have contended that, first of all, the queen begins the excitement in the hive by running around, and the bees, thinking something is up with their sovereign, follow in the grand quadrille. When the queen, after getting the whole hive in an uproar, comes forth from the hive, the bees all follow to go with her to their new home. These authors also say that at the same time the bees have looked out a place to go. Now these do not go well together, for if this swarming is all the queen's doing, why have the bees looked out a new place to go to. Is it instinct? Yes, that is right; but the queen does not come out first, and further, I never knew a queen to come out until there was a pretty good swarm in the air; and frequently her majesty does not come out until all, or nearly all, her subjects are out and circling in the air.

I make it a practice, when I see a swarm coming out, to set myself close by the hive and catch her majesty as she comes out. She, as a general rule, stops to smooth her wings and prepare for her flight. Then I take her by her wings, put her in a cage, and lay her on the alighting board. Still they come out, and run right over her, never paying attention to her until all are out. The swarm alights just the same as if the queen was with them. Then, as I get time, I extract the combs, at the same time destroying all queen cells; put the combs back; let the queen go in, and the bees, missing their queen, will come back, and never go without her.

But, to the question: What do they come out for, and why do they swarm? It is just for this reason: the combs are all full of brood and honey; the hive is full of bees, and they are so crowded there is no room to work; and the bees (not the queen) get discouraged working in such a crowded state. The weather is getting

hotter every day, and something has to be done; so out they come.

Now, to prove this, bees are supposed to swarm in the spring, in the height of the breeding season. Show me the apiarist who has not had swarms come out and go back, sometimes after they have been hived. Now what was the reason? It was just because they lost their queen, and knew by going back they would soon have another. How was the queen lost? Because she was not in a condition to fly, being too heavy with eggs, and she fell in the grass or brush and was lost. Now, does nature tell us in such cases that it was the queen that caused the bees to swarm? I think not; and again, anyone catching a queen as she comes out with the swarm and putting her on a black ground, and covering her with a glass, will see the eggs dropping from her. This is not always the case, but it goes a long way to show us that the queen had unfinished business at the time she came forth, and no one, at the present enlightened stage of the world, can say the queen is the first to come from the hive.

A swarm of bees more than once has been compared with a well-governed and regulated city or household; and again, who is it that says let us move and go to a new country? Is it the female of our families or is it the working part of our household? I do not mean to say that the female does not work, nor do I call the worker bees males, but they, as well as men, are generally the providers for the family, or if not, they ought to be.

I wish to say a few words about second swarms or casts, for all swarms after the first are casts. I do not know hardly what they come out for, unless it is to make their owner dream bad dreams. But let us see if we can study it out and solve the problem: First, the old bees have all gone with their fertile queens, and what is left? Plenty of brood; the combs are all full. Young bees are hatching all the time, and there is no queen to lay in the place they hatch from, so the young bees fill it up with honey, and so it goes from day to day for eight or ten days. Perhaps then out comes a young queen, fills herself with honey, then hears her sisters shouting for liberty. But no, that will not do. I must kill them, for I can fill this house myself; and so she sails in. But no, the bees will not let her, so she gets excited, and the bees going without a queen for a few days, thinking something is wrong get up on their ear and out they come, followed by the young queen. There are exceptions to all rules in the bee business.

R. W. KENNEY.
Springville, Ventura County.

A Note on Hives.

EDITORS PRESS:—Hives! Yes, hives. We don't know it all yet on the *hive* question. "Why do some of our Langstroth hives split and check up; others spring up, and twist about, sometimes till a bee can get in at almost every corner?" asked one of our beekeepers the other day, and I answered: It is your lumber. You got your hives from San Francisco, where it is now a specialty. Yes, a commission merchant sent me as pretty a bill of lumber as I ever saw. I made it up; painted every box; and more than half of them had to split, some way or how; and the caps (or lids) warp, even to the pulling out of some of the nails.

Then we examined a number of hives (Langstroth's); we found that wherever a box chanced to be made of old, dark, tender redwood the hive was good. But the board that, by its growth, showed to be of a young tree, light color, large ribs (or growths), and particularly if the heart of the tree appeared in the cap-board, it was nearly certain to split, or warp, or both.

Conclusion. Cull your lumber. Work only old, dark, tender redwood; and not this light, young, half-breed cedar, that is now so beautiful and inviting in our box factories.

Los Nietos. GEO. KAY MILLER.

FLORICULTURE.

Concerning a Satisfactory Flower Garden.

EDITORS PRESS:—The summer flowers are gone, and this is the month of chrysanthemums and other blossoms of autumn. The garden presents a weedy appearance, and there is a good deal to be done in the way of trimming plants and getting ready for winter. It is time, therefore, to take a retrospective view of the year's garden, and plan a little for the future.

In the typical flower garden two objects are to be obtained: First, masses of color which shall make the grounds at all seasons ornamental; second, beds of mixed flowers which can at all seasons be cut for bouquets and decoration. To have these two things is to have a perfect garden. We must in some places plant with exact and mathematical precision; in others we must scatter with lavish profusion. Looking back, in these lonely autumn months, on the work and pleasure of the garden, we will all agree that the flowers we gave lavishly to visitors from more desolate regions, or to chubby-faced children creeping lazily to school,

are among our sweetest of memories. Let us then resolve that the new garden of the next year shall be a flower-missionary, a blossom-evangel.

In order to really enjoy a garden it is necessary to be intimately conversant with its very beginnings. A wealthy man should at least superintend his garden so closely as to be identified with every onward step; but here, indeed, the artisan, the clerk, and the literary toiler, whose life is a chase after new ideas, may be happiest doing their own work, in their own diminutive garden. The child's first aspiration is for a place in which to plant, exhumate, examine and replant seeds. Our grown-up ideas do not, fortunately for the cause of landscape gardening, fluctuate so often, but still, like children, we play with the impulses of nature, we bud our common roses, we graft our unmarketable grapes, we root out our surplus plants, we follow everywhere our own sweet will. Herein lies much of the charm of that eternal pursuit—gardening.

Whoever wants a satisfactory garden should be in the habit of taking notes of new or rare plants he happens to see in other gardens or nurseries, or read of in reputable journals. These notes should, so far as possible, give time of bloom, color of flower, style of growth, treatment, etc. A small book, ruled in columns, will be found convenient. The following may serve as a suggestion:

Name.	Description.	Treatment.	Remarks.
Aucuba Japonica, or Gold-dust tree.	Evergreen shrub, leaves blotched with yellow. Very ornamental berries also are showy.	Good drainage and place. Increased by cuttings and layers.	Libble to attacks of scale bug. Wash with whale-oil soap.
Calycanthus, Florida, or strawberry shrub.	Deciduous, large, flowers double, chocolate-colored, fragrant.	Wet soil. Grows from seeds and cuttings.	We have a native species, not so fragrant.

By following some such plan faithfully for a few years the fund of accumulated information will be surprising, and it will be in a tabulated and easily accessible form.

The first line of thought, now, concerns winter and spring-blooming bulbs, which may be planted so closely as to make a mass of bloom, and then taken up, as the leaves wither, and summer bulbs put in their place. Who of us would be without the "shining yellow daffodils," the holiday, bannered tulips, the veined cups of crocus, the stately clusters of narcissi, and the glowing anemone groups?

Before October's golden days slip into the cloud and chill of November, the bulbs for the next year should be ordered. Then prepare the ground and plant early. Do not forget the hyacinth, which succeeds so well out doors here, or the oxalis, which makes a beautiful spring border, or our own wild tulips, the cyclotheras.

Then scatter here and there, ready for the early rains, a few seeds of hardy annuals, such as collinsia, whitlavia, rocket larkspur, sweet pea, which will in due season give you satisfaction pressed down and running over.

CHARLES H. SHINN.
Niles, Cal.

Getting Close to Nature.

In the *Popular Science Monthly* for November Prof. W. K. Brooks writes an article on "how to study natural history," which urges a true method. Concerning relying upon prints and the like, he says: The original investigator of nature soon learns by constant experience that descriptions or even drawings, however correct, do not exactly represent the objects themselves, but are imperfect and ideal abstractions. This is true, to a greater or less extent, of every drawing of the simplest organ or tissue, and of every description of a species of genus of animals or plants; but it is especially and most emphatically true of all attempts at definitions of the larger and more comprehensive groups of organisms.

A definition of such a group as an order or class of animals, attempting as it does to state in a few words the characteristics which are common to all the forms included, is necessarily abstract, and may not, in fact cannot, be exactly embodied in any one individual of the whole group. Then, too, certain characteristics which are exhibited by only one or two aberrant forms, and are accordingly not characteristic of the group as a whole, may be omitted from the definition, although they furnish the clue to the relationship with allied groups, and are therefore of the utmost importance. An illustration which is not drawn from the organic world may make this more evident. The fact that printed books have followed and are a perfected form of the parchment manuscripts of the middle ages is shown by the ornamental initial letters, imitations of the illuminated letters of the manuscripts, which are placed at the heads of the chapters of a few books. Notwithstanding their significance, these initial letters would not find a place in any definition or general description of a modern book. As a consequence of this inevitable lack of agreement between natural objects and their definitions, all knowledge of nature is of very little value unless it is based upon a direct personal acquaintance with the thing itself.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

A Business Well Systematized.

Happening in at the Grangers' Bank the other day we were shown the interesting manner in which the Manager, Mr. Montpelier, has systematized the grain-loan business of the Bank. The loan of money on stored grain by the Grangers' Bank is now quite large; if we are not mistaken something like \$400,000 has been lent on this security, and grain growers accommodate to that extent. In order that the authorities of the Bank may see at any time just exactly upon what security their loans have been made, Mr. Montpelier has a long series of tight glass jars, in each of which there is placed an average sample of a certain lot of grain upon which a loan has been made. These jars, arranged and labeled according to the group of grain-growing counties, make a handsome exhibit of the cereal product of our State and are well worth study.

Another avenue of special information developed by the Bank is concerning the character of all places where grain is stored and the people owning or in charge of them. These reports are from the stockholders or agents of the Bank in the different parts of the State and are believed to be wholly trustworthy. They are of course for the sole use of the Bank, and therefore are confidential between the Bank and its agents. So far as we are able to judge of such matters, it seems to us that Mr. Montpelier has placed this business upon a very definite and safe basis, and therefore has guarded well the interests of the Bank, while he has accommodated those deserving money on grain as security.

THE NATIONAL GRANGE.—It is with deep regret we are compelled to announce our inability to attend the coming session of the National Grange. Preparations had been made and trunk packed for the journey, but business of much importance met with unexpected delay, and imperative duty seems to demand our presence here. The wishes of the California State Grange, as expressed at its last session, will be communicated to the National Grange by letter, and will, no doubt, receive careful consideration.

I. C. STEELE,
Worthy Master State Grange.

In Memoriam.

PLACERVILLE GRANGE, No. 242, El Dorado county, October 30th, 1878.

WHEREAS, It has pleased the Divine Master above to call to his Supreme Grange our Brother THOMAS BURNS.

Resolved, That it is but a just tribute to the memory of our deceased brother, to say that we regret his removal from our Associations, and that we mourn his departure from our midst.

Resolved, That in the death of Brother Burns the wife has lost a faithful and devoted husband, the children a kind and indulgent father, our Grange an esteemed brother, the community a worthy citizen.

Resolved, That out of respect to his memory, this Grange put on mourning for thirty days; that a copy of these resolutions be furnished to the family of the deceased, and one furnished the *Mountain Democrat* and to the *RURAL PRESS* for publication, and a copy of the same be spread on the minutes of this Grange.—[Committee, Wm. Wiltse, J. P. Munson and Peter Vignat.

Reflections of a Poor Farmer.

"Is there for honest poverty, that hangs his head and a that;
The coward, slave, I pass him by, I dare be poor for a that."

EDITORS PRESS:—This is all very nice as a sentiment, but reduce it to a reality and we find no poetry whatever in it. I am a poor farmer, and, as one of that too numerous class on this coast, claim that I have a right to the sympathy of the more fortunate of my class, and wish to avail of their experience. A poor farmer has a hard time of it generally; if he is blessed with good health, is handy in using tools, industrious, economical and orderly, he may possibly manage to come out even at the end of the year, if the season is favorable; but if such a winter as the last come upon him his struggle is necessarily a hard one, and very discouraging. He is obliged to wait for another year, and centers his hopes in that for recuperation, and is often obliged to ask the indulgence of such as he may chance to owe; but if they insist, as they often do, upon being paid, then comes the sacrifice, he is attached without warning. What little property he may have, beyond what the law allows him, is taken from him, and, if he has no friends to come to his assistance, it is sold at a fearful sacrifice. The constable and justice have a good time of it; costs accumulate fearfully; one attachment issued, another quickly follows, and the poor farmer is ruined. People look on and say, "It's really too bad; just be-

cause we had an unfavorable season, to actually ruin an industrious, honest man." He contracted his debts in good faith, depending on his crops; through no fault of his these fail him, and the machinery of a "Justice" Court is let loose upon him. Oh, debt, debt! could pain of mine but be the means of preventing this fearful curse to us all, the utter ruin of but too many, I would gladly use it to the extent of my poor ability, to warn and exhort my co-farmers to shun it as they would the plague.

There is a mania with some to buy things they do not really need, if payment can only be put off for a time; but pay day comes, and often with it great humiliation and distress. Emergencies may arise, such as sickness, where it cannot be avoided; but, as a motto, "Pay as you go," it is a sure and safe one.

The poor farmer welcomes to his home the *RURAL PRESS*; it contains so much valuable information and good reading matter, and somehow it seems to be strongly tinged with that scarce commodity of the present day, humanity. We feel as if a brother or a friend was talking to us, and occasionally there bursts forth a bold and fearless denunciation of the evils with which the present age is full to overflowing. There is too much cringing to moneyed power, too much hypocrisy, too little sincerity; crime in high places is not punished. Pride and licentiousness stalk boldly in our midst; the toilers of the land are but poorly paid, while the rich—alas! how came they so?—roll in luxury and pomp, unmindful of the source from which it came. I was in hopes the Grangers would introduce a stronger brotherhood among farmers; but, in all sincerity, I must say I am disappointed, but trust the Order may develop its better work in the future. I was born a member of a society that practically live up to all the principles professed by Grangers. I refer to the Quakers, and perhaps no sect has won more respect from the world than these goodly people. Unostentatious, conscientious in the discharge of their duties, honorable in all their dealings, full of charity and sympathy for the unfortunate, a true friend in need, fully living up to the principles of the "Golden Rule," and in every respect practical Christians; isolated as I now am from their society and influence, I yet try in some respects to profit by their principles and teachings.

The most of my life has been spent in mercantile pursuits, but when misfortunes came upon me I retired to the country, nauseated with city life. I had seen enough of pride and slavery to fashion and the hollow-heartedness of city friends. I love the country, its freedom, its purity of life, its healthful influence on both mind and body. I have seen much of the world and can say with Byron—

"Yet I blame not the world, nor despise it,
Nor the war of the many with one,
If my soul were not fitted to prize it,
'Twere folly not sooner to shun."

My home is a bumble one, but with plenty of good books I am not lonesome. If farmers generally would take more agricultural papers they would derive a great advantage from it; it's the best reading in the world.

The poor farmer needs the countenance and sympathy of the more fortunate of his class; he cannot buy headers, threshers, mowing machines, gang plows, Norman horses or Jersey cattle; he cannot buy prepared manures to put in each hill of corn, or the ingredients to make compost manures; he does all his work, often unaided, but he becomes a practical man and a close observer, and analyzes to the best of his ability the obscure relations of cause and effect. This class of men are generally good citizens, and if better educated, would fill many offices to their credit. A kind look, a word of sympathy and encouragement costs nothing, but often does much good; yet how few deal in this merchandise, they think it don't pay, but it does. "The quality of mercy is not strained, it dropeth gently like the dew from heaven, and is twice blessed; it blesses him that gives and him that receives." But instead of this the poor man in his struggles has to encounter the jealousy, selfishness and indifference of the world. His heart is not warmed by genial friendship and encouragement, he plods on alone, no one cares for him, he is poor and this is the age of gold-worshippers; no matter how they get the gold, if they only get it.

I remember the good old times when the *entree* into good society was based upon moral and intellectual worth; now it is gold. Gold is king and will reign so long as human pride feeds and sustains him.

Perhaps an agricultural paper is not the proper medium for a moral essay, yet I feel that through your columns, perhaps, my words may reach some congenial hearts. It is not in the gorgeous salons of the rich and proud that we are to look for the material to carry on the world, but it is in the strong arm and stout heart of the laboring man that we find the true source of all prosperity. These luxurious livers, this mushroom aristocracy, these sensual fashion-worshippers, must soon rot out and die; they become enervated and must give place to a purer and better class—a class that will call crime by its true name and punish it accordingly. This "tickle me and I'll tickle you" sentiment will be less in vogue; sincerity, charity and benevolence shall rule in the hearts of men, and as the great and indefinable law of nature, the law of gravitation, runs through and connects the countless worlds which revolve in the immensity of space, so may the great principles of friendship, love and truth unite mankind into one universal brotherhood until the world grows old and dies.

Economy and Molasses.

EDITORS PRESS:—Some months ago I assented the Californians of extravagance. The editor of the *RURAL PRESS* thought I carried the matter a little too far, especially as regards the Californians of the present day. Perhaps I did, but I repeat the charge, with this qualification, that probably it may not apply to all sections of the State. The man with 10,000 acres of land may raise 10,000 acres of wheat; I have no objections. He is doing good to himself and to his neighborhood. But for the man with 40 or 80 acres to follow his example is ruinous. True, when everything is favorable—good seasons, good crops, fair prices, he is on the road to prosperity; but, when one of these conditions fail, as surely they will fail every few years, he is in doleful circumstances; he has not the wherewith to buy his beef, his pork, his potatoes, cabbages, onions and salt. Let him plant all these things but the meat and salt, and let him plant many other things also; and, though one or two may fail, he is still sure to raise enough to be comfortable any and every year that ever has or probably ever will visit California. The man with nothing but wheat or barley, has overwhelmingly hard work one-half the year—has to hire help at fearfully high rates; and then he idle and spend his hard earnings the other half of the year. This is extravagance. This is a sinful waste of time. It is wasteful to buy what can be raised on the farm. It is wasteful of time and wasteful of money. It is a good rule, of almost universal application, never to buy anything that the farmer can raise. He can thus have work all the year round. Work in the garden, work setting, trimming and tending trees and vines; when his haying and harvesting are done, he has fruit to pick and can and sell; his potatoes, his beans, his corn, pumpkins, sweet potatoes, onions, carrots, successively demand his attention; he has something to do from year's beginning to year's ending, and not a moment's time to growl, or even think of hard times. In fact the poor ignorant soul is not aware, in his blissful unconsciousness, that there are any hard times.

I have had work, profitable work on my little ranch of 25 acres every day since I have been on it, with some exceptions during the dry year. Let me illustrate even at the expense of being a little gossipy and egotistical. I have raised this year, more or less of the following named products: Lettuce, radish, turnip, rutabaga, cabbage, asparagus, onion, beet, carrot, cucumber, melon, celery, peanut, Hubbard squash, summer squash, pumpkin, pie melon, sweet and Irish potato, tomato, four kinds of beans, field and sweet corn, Egyptian corn, barley, wheat, blackberries, gooseberries, currants, strawberries, raspberries, grapes, apples, peaches, figs, apricots, plums, cherry-plums, nectarines, almonds. Also orange, lemon, lime trees, etc., not yet in bearing. The above for family use and not as a market gardener, although I have sold when I had a surplus. Besides which we have raised bees and hogs, and sold butter, milk, eggs and chickens.

So much for "economy," now for the "molasses." Last year I raised a patch of sorghum, which, being the dry year, made excellent food for my milk cows and horses, it keeping green the entire season, growing up again as it was cut down. This fall, with a wooden mill and a galvanized sheet-iron pan, I am making a barrel or two of molasses. Perhaps an iron mill might be more economical, however. It makes a very fair article, lighter colored than that usually made East. As to the quality and worth, that depends somewhat upon taste, and the taste, like the taste for figs or tomatoes, may be very much educated. Some do not like it. For ourselves, we prefer it to almost any quality of molasses we can buy.

As to the profitability of making it for sale in this State, I have not made sufficient to be able to state; as to making it for family use, were several neighbors to unite and buy a mill, it would save a large bill in the line of sweetening; being for some culinary purposes better than sugar, although it is not a complete substitute for sugar. I have made watermelon molasses, but I find sorghum better and cheaper. The plant stands the drouth better than corn. Indeed, I think it would grow in the dry interior valleys of the State, and perhaps produce a wonderful amount of saccharine matter in those very warm regions, and such as would make a fair article of sugar. I scarcely think what I have made here will granulate. Our summer has been exceptionally cool, and my sorghum has scarcely matured, the molasses being too acid for sugar, although the taste is very pleasant, both for table use and sweetening various kinds of pies, cakes and sauces.

S. P. SNOW.
Santa Barbara, Cal., Oct. 15th, 1878.

GEORGE FESSLER, the defaulting Treasurer of Stark county, Ohio, has been sentenced to twelve years in the Penitentiary at hard labor, and a fine of \$60,000.

It is reported in Washington that Colonel F. A. Bee has been appointed Consul for China at San Francisco.

AMERICAN tugs have been seized by Dominion officials for wrecking in Canadian waters.

AGRICULTURAL NOTES.

California.

COLUSA.

WHEAT IN THE GROUND.—*Sun*, Nov. 9: The first little rain had the effect of sprouting a great deal of volunteer and early-sown wheat, and it is the opinion of many farmers that a great deal of it will die. The last little shower, on Monday, would have done considerable good towards keeping it growing, had it not been for the norther which followed so soon after. But even when grain has been sprouted, all the seeds have not been made to grow, and some still lie in the ground dry and sound. The effect on some fields, then, will be a thin stand.

COLT SHOW.—Knowing that Boylston had a large number of very fine colts in this immediate neighborhood, Mr. Billups offered a prize of \$50 for the best colt, and \$25 for the second best, and naturally expected that the owners would take some interest in the show. There were four, however, on exhibition. Mat. Henderholds took the first money, and Dick Williams the second. There were several fine colts within one mile of town which were not brought in. Breeders should take more interest in such matters so as to encourage the offering of premiums and the consequent improvement of stock.

CONTRA COSTA.

EGYPTIAN CORN.—*Gazette*, Oct. 9: Mr. Smith Ashly of Pacheco is one of the gentlemen who has experimented in raising Egyptian corn this season in our section; and from his experience is disposed to commend it as a productive and valuable feed crop. He has left with us a small bag containing four ounces of the seed, which is precisely the quantity he planted last spring and from which he has, within a few days, cleaned up over 4,000 pounds of the grain, besides feeding his cows largely with the fodder, of which they seem very fond and on which they give more and richer milk than he has been accustomed to get from them on any other feed at this season of the year. His planting of this season was partially upon adobe ground and the growth upon it has been as good as that upon loamy soil. Since the heads were gathered some weeks ago the stalks have continued green and putting out new growths, thus affording rich fall pasture for cattle. Mr. Ashly believes it will prove the most valuable stock feed crop that has yet been introduced in our section, and he proposes having some of the corn ground, and testing its bread-making and other table use qualities.

FRESNO.

AVOIDING FEVER.—*Expositor*, Nov. 7: The appearance of fever and ague in some of the irrigated districts and along some of the rivers of this valley, has caused the inquiry to be frequently made, "How can fever be avoided?" In fever and ague districts it is hard to answer this question, but no portion of this valley is, strictly speaking, a fever district, and, therefore, a proper observance of the ordinary sanitary laws removes all danger of malarial diseases. But when people permit pools of stagnant water to stand about their houses they must expect sickness. In the southern portion of the valley, fever and ague used to be quite prevalent, but the people have avoided it in a great measure by a little care. It was found on Kern island by boring their wells and getting water from the second strata, that beneficial effects resulted—people using such water being usually free from the shakes, while those who used water from surface wells suffer severely. Perhaps this would also be the effect in irrigated districts where complaints of fever are now made. At any rate it will cost but little to try the experiment.

WORK.—The weather continues dry and pleasant, and the farmers are taking advantage of it, and are busily preparing for the winter. Those who can are plowing, and preparing their land for seedling. We have talked with a number of farmers from various portions of the county and they all say that they will seed a very much larger area of land this winter; and many persons who were unable to plant last season will put in fields of grain. The open weather this fall, most of the farmers think, augurs well for a wet winter, and with this valley a wet winter secures good crops and a prosperous season.

LOS ANGELES.

CORN.—*Outlook*, Nov. 9: Assessor Ryan says that the acreage sown to corn this year in Los Angeles county sums up 22,000 acres, and that an average of 45 bushels to the acre would be a fair one. This would give a total yield of 990,000 bushels. The best corn lands will yield at least 75 bushels to the acre this year; but a considerable area of mesa land has been planted, which accounts for the low average given by the Assessor.

MARIN.

PRODUCT OF A LARGE DAIRY.—San Rafael *Journal*: When dairymen meet together they are very apt to compare notes as to each others' systems of conducting business, and are quick to appropriate good suggestions thus obtained. In an interview with Mr. A. J. Pierce, of Tomales Point, last week, we ascertained that he had made the splendid average of 222 pounds of butter to the cow, for the year ending November 1st, 1878. This, for a herd of 250 cows, is an average that will be hard to beat, and Mr. Pierce was himself surprised at it. He attributes it to the excellence of his herd, which he has

culled for several years, discarding every cow that was inferior in milking qualities as soon as he could replace her. Mr. Pierce returned to his ranch about five years ago, it having been rented before that. In his first year he made about 150 pounds of the cow, and each year since it has increased. In 1876, it was 175 pounds, in 1877, 186 pounds, and the year just closed 222 pounds. The total product this year is 55,535 pounds of butter, which has averaged 25½ cents per pound, or a little more than \$14,000.

NICE BUTTER TABLE.—We saw at Guldager & Murphy's, in Tomales, a table for the use of a butter maker, which is so far superior to all other tables that it must come into general use. It consists of five parts, two uprights or legs, two horizontals or stringers, and the top or table. Not a nail or screw is used in putting it together, and therefore no iron rust can attach to it. The stringers are mortised into the uprights, and the top is held in place by four mortises which shut on to half inch projections of the uprights. It can be put together or taken apart in one minute, which is a great convenience in many ways. It is very strong and firm. This table was designed and made by M. J. Murphy, for M. V. Miller. We expect to see more of them in our dairies, when their advantages become known. Mr. Murphy also makes improved butter workers, which are very popular, and has devised an improved method for regulating the depths of the furrow, by a screw on the beam of the plow.

NAPA.

THE GRAPE HARVEST.—*Register*, Nov. 9: By the last of this week, most of the wine men in this valley will have finished crushing grapes for this season. Many vineyards in the upper part of the valley are already gleaned, and the wine is now in process of fermentation. Mr. P. Van Bever, whose cellar is in town, finished pressing yesterday, having this season used 1,500 tons of grapes of different varieties, which it is estimated will produce 210,000 gallons of wine. At Scmorille's cellar, wine will be made for perhaps a week or more to come; he expects to make from 25,000 to 30,000 gallons. Mr. Migliavacca is not now making wine, and has probably finished for this season. The past year has been a profitable one for vineyardists, as the yield was greater than for the past ten years, and the price obtained was larger. If we mistake not, the wine business will continue to grow from year to year until the fame of Napa wines will be world-wide.

LARGE FARMERS.—We met Mr. Abram Clark, the great Berryessa farmer, yesterday. The quantity of grain he harvested the past season in this county, and on the Sacramento, will aggregate 75,000 bags of 133 to 135 pounds each. He says the yield was about one-third lighter than usual, and, besides, he lost some 9,000 bags of wheat, by fire, on his Colusa farm. He already has 6,500 acres of land seeded for another crop in Colusa, and will put 1,500 acres into grain in Berryessa this winter. Mr. Clark has sold this season over \$6,000 worth of hogs to Jos. Henry of this city, and has about as many more fattening on his Berryessa farm. Mr. John Finnell, another of Napa's leading farmers, writes to a friend in Napa from Tehama county, reporting his safe arrival in his new home. He has leased portions of his Tehama farm to Napa men as follows, reserving 5,000 acres to work himself: Matthew and Thomas Vann, 2,500 acres; Duhig & McClure, 2,000 acres; Boothe & Dollarhide, 1,000 acres; Bonnenan & Ashbrook, 2,000 acres; Edgington & Grigsby, 2,000 acres; Musgrove, 500 acres; Forrester, 250 acres. Mr. Finnell has renewed his lease of the 18,000-acre Walsh ranch in Colusa county, paying \$35,000 a year rent.

SAN BERNARDINO.

GOOD RAISIN WEATHER.—*Press*, Nov. 2: We are having a magnificent season to dry our raisins. Calm, warm days, cloudless from dawn till dark pass in ceaseless succession across our horizon, giving no hint of the dreary winter which in the East would be just at hand. Our real spring is rapidly advancing, riding on the distant rain-cloud.

SAN JOAQUIN.

SALE OF DAIRY STOCK.—*Herald*: Mr. John E. Moore has disposed of his entire herd of about 50 dairy cows to Mr. James Alexander, an experienced dairyman who has been in the employ of Mr. Moore and Mr. W. L. Overhiser for several years past. Mr. Moore has retired from the dairy business and will devote his attention exclusively to the management of his ranches. Dairying has been a profitable occupation for him. Mr. Alexander commences the business under very favorable circumstances, and will undoubtedly meet with the same success that attended his predecessor. He has taken a lease of the Home ranch and the dairy, and gets all the dairy utensils with the stock. [We know Mr. Alexander. He has the reputation of treating a cow as kindly as he does a lady, and he will succeed.—Eds. PRESS.]

BURNING TILES.—*Independent*: John Grattan, one of the pioneer farmers of the county, is extending his farming operations this year, having leased 480 acres of land on the upper division of Roberts island, which he is preparing to sow in grain. The land was raw tne when he went on it a few weeks ago, and had he attempted to plow it he thinks it would have cost him five dollars an acre. Instead of this he has been burning the sod with the use of kerosene oil, the only means by which he could start the fires. He purchased 150 gallons of oil, and his method of firing it was to make a small hole

with his boot heel every few feet, fill the hole with oil and set it on fire. By this means he succeeded in burning over the whole tract, reducing it to a condition ready to receive a crop, with a little additional work of harrowing. The land has enough sediment in it to prevent the fire from burning deeper than six or seven inches. The fire, therefore, does no injury to the ground, but is rather a benefit to the health of the island, as it checks the decay of a vast amount of vegetable matter that must have been deleterious to health. The coal oil dodge was original with Mr. Grattan, and has proven so successful and economical that it has been generally adopted by the settlers. More land will be cultivated on Roberts island this year than ever before. About two-thirds of the upper division has been leased to practical farmers, who are putting in crops.

AN AGRICULTURAL HALL.—*Herald*: The San Joaquin Valley agricultural society is determined to own and control an agricultural hall. The society needs one, and must have one. It is now out of debt and owns valuable property at the race-track, which is being permanently improved year by year. The latest movement toward obtaining an agricultural hall is to obtain from the city the lease, for a long term of years, amounting virtually to a gift, of Washington square, and to build thereon a fine one-story building suitable for the pavilion displays, and for other gatherings for which a large building is necessary. The managers of the agricultural society are now fully determined to go on and build such a building provided they can secure Washington square.

WEST SIDE IRRIGATION.—*Independent*, Nov. 9th: The farmers on the west side of the San Joaquin river have about given up all hope of ever building the great canal from Tulare lake, about which so much agitation was made a year or two ago. The matter is little talked about, and it seems to be a settled conviction that nothing will ever be done. They say that Miller & Lux not only "bulldozed" the bill in the Legislature last winter, but have since exerted their powerful influence with the commissioners to such an extent that they have never held a meeting to arrange for advertising for bids for the bonds. The only hope of the farmers now is that they may be able to strike artesian water. We are informed that the prospects of finding a stratum of water at a reasonable depth, that will flow above the surface, is good. A farmer living at the mouth of Livermore Pass, on the edge of the plain next the foothills, north of Midway station, has struck flowing water at very little depth. Just how deep the well is our informant could not say, but his impression was that it was less than 100 feet. At any rate the water flows a perpetual stream. It is believed that flowing water may be obtained almost anywhere on the West Side at a depth not to exceed 400 or 500 feet.

THE EMPEROR GRAPE.—*Herald*: W. L. Overhiser put us under obligations to-day for a box of most excellent and beautiful grapes. They are of the Emperor variety, a kind that is not yet much cultivated in this State. These grapes are pre-eminently the best shipping grape we have seen. They are very firm and large, and are individually hung on quite long flexible stems, so that they are not broken in shipping. Mr. Overhiser obtained the cuttings from Mr. Blower, of Yolo county, whose exhibit of grapes at the State fair attracted so much attention and admiration. The cuttings were grafted upon native California vines a year ago last spring, and this year they have produced a fine crop.

SAN MATEO.

WORK ON THE COAST.—*Redwood Times*, Nov. 7: The farmers on the coast are preparing for the next season's campaign, fixing plows, etc. We believe that a large portion of the land will remain idle, as owners of large tracts desire to rent their lands for cash, and as that article is very scarce at present, the landlords, to realize anything on their possessions, will have to rent on shares. The blacksmiths are busily engaged sharpening plow-points, etc. R. I. Knapp is making his famous plows, and Messrs. Hatch & Davis are making arrangements to go into the manufacture of plows, second to none in the State. Spanishtown can claim its share among the enterprising towns on the coast.

SANTA CRUZ.

BEEF SUGAR.—*Pajaronian*, Nov. 7: From an interview with Mr. Mitchell, of the Sequel beet sugar factory, we learn that over 4,000 tons of beets have been shipped from the Pajaro valley this season, and that about 5,000 tons more will be forwarded from this place, making a total of 9,000 tons or over. At present 22 carloads a day are shipped, aggregating 176 tons daily. A large portion of the crop is being stacked in John T. Porter's field, Pajaro, waiting for shipment. The price paid for beets is the same as last year, \$4.75 per ton. Numerous applications have been made for beet contracts the coming year, and undoubtedly the acreage in beets for 1879 will be far larger than it was this season. This year's crop of beets contains more saccharine matter to the ton than any previous crop. Practicing rotation of crops, beet raising can be made one of the most profitable investments offered in the Pajaro.

SOLANO.

MR. BRIGGS' NEW DRYING HOUSE.—*Davisville* correspondent *Dixon Tribune*: G. W. Briggs is having erected on his place opposite Davisville, on the Solano side of the creek, a patent drying house, of the following dimensions and capacity: The size of the building is 79x20 feet, 20 feet high; contains 17 floors, with

a space of 13 inches between each floor; giving sufficient capacity for 9,600 trays; each tray is calculated to contain 40 pounds of fruit, making an aggregate of 200 tons. Mr. Briggs is grown throughout the State as a leading fruit grower.

SONOMA.

OUR GRAPE CROP.—*Healdsburg Enterprise*, Nov. 9: Through the kindness of W. P. Snook we are enabled to present a pretty fair approximate of the grape crop of this section. Mr. Snook has been engaged this season with Louis Bertucci, purchasing grapes for the commission house of Galli & Co., San Francisco. In his rounds, Mr. Snook obtained the following estimates: At Chas. Jones' winery, 60 tons; De Weiderhold's and Bermel's wineries, in Healdsburg, 100 tons; old Appold winery, over 60 tons; Bloch & Colson, over 150 tons; shipped by Bertucci, 350 tons; shipped by Simi, between 150 and 200 tons. The above figures show a total of 870 tons. In addition to that amount large quantities of grapes in this immediate vicinity, as well as in vicinities easily accessible to Healdsburg, were bought in Windsor, for the large wineries there, and of which no record is furnished. Also, many grapes were fed to hogs, as the market price this year was very low. Furthermore, the crop was lighter this year than usual. In view of these circumstances it is fair to estimate the entire grape crop of this section, in ordinary seasons, at 1,500 tons. Such being the case, it appears that a winery in Healdsburg could be made a success, for surely there can be no lack of grapes with which to supply it.

THE WOOL INTEREST.—*Santa Rosa Democrat*: The amount of wool raised in this vicinity, and brought to Santa Rosa for market in the spring, was 900 bales, of an average weight of 250 pounds each, aggregating 225,000 pounds, for which the producer was paid an average of 23 cents a pound, making the total value \$51,750. The entire product of spring wool of Sonoma county approximates 3,500 bales, or 675,000 pounds and estimating the amount paid per pound in all parts of the county to be the same as that paid here, would fix the value at \$155,250. The fall clip has not all been brought to market yet, and the estimates we are enabled to present are consequently only partial. Six hundred bales have already been brought here, of an aggregate weight of 150,000 pounds, and of an average value of 15 cents per pound, and worth \$22,500. The entire amount of fall wool that has reached the market from this county this season is about 2,200 bales, or 550,000 pounds, and averaging the value at 15 cents per pound, would make the entire product worth \$82,500.

Improvement in Boots and Shoes.

We paid a visit recently to the large boot and shoe factory of I. M. Wentworth & Co., at West Berkeley, near Oakland, and were much pleased at witnessing the operation of the McKay Standard screw-fastening machines. What we ordinarily know as "screwed boots" are by no means what they mean, as with most of them, a hole is made in the leather with an awl and the screw is driven into the hole. Moreover, what is called the screw is only an indented piece of wire, and after being put in place is liable to come out or work up into the foot while the shoe is worn.

In the Standard screw-fastened shoe, however, the soles are screwed on with screws having a deep-cut thread and slight pitch, so that it is impossible to rip the pieces apart. Each screw is screwed into the sole, making its own hole in the leather, no awl being used. The Standard screw has therefore far more holding power than any other fastening.

The machinery by which the shoes are made does its work to perfection. The screws are made with deep, perfect threads, and pointed so as to go through the leather without any preparatory awl hole. They are inserted under pressure, so that the parts are pressed and held together with a solidity that makes a perfect joint, impossible to rip. One of the machines will make 300 pair of boots or shoes per day.

We are all interested in introducing the best article, by the shortest cut possible, and the attention of the public is called to these boots as furnishing the best for good wear. The screws are cut in a way so as to have a wide fringe or thread, the solid central part being small, so as to leave only a small hole in the leather. The machine which inserts the screws in the leather runs at a speed of 2,000 revolutions a minute, squeezing the leather together as the screw is inserted. This class of goods is no new experiment. There are from 150 to 200 machines in constant use in the Eastern States at present manufacturing Standard screwed boots. The Government, after an official examination, adopted this as the best fastening in the world, and over a million pair have been worn by soldiers.

For miners and farmers these boots are specially desirable. In this country where the changes of temperature are severe, good boots

are essential. No shrinkage affects these, as the screws are inserted under so much pressure. To see the work is convincing. This is one of the new enterprises that seems to us to become known is sure to become popular, as it is particularly suited to a country where labor is high, and a positively good article is wanted to compete with Eastern products. Hitherto a good many of our hides have been sent East, coming back to us made up into goods, after having been in a ship's hold for the best part of a year, and paid freight and insurance both ways. Moreover, we are not apt to get the best here, for the Eastern manufacturers naturally desire to send their poorest articles furthest from home. All of this is on account of the high prices of skilled labor. Now, if we can arrange machinery that will work better than hands, shall we be slow to adopt it? Of course, the uppers and some of the work is done by hand, enough to give employment to a goodly lot of men and women, but the heavy sole work is all accomplished by machinery. The insoles are smooth and clean, and the screws are run with pressure by the machine in such a manner that they cannot work loose and cause inconvenience. Rosenthal, Feder & Co., 33 and 35 Battery street, and I. M. Wentworth & Co., 537 and 867 Market, are agents for the sale of the Standard screw fastened boots and shoes. A machine has also been put on for Porter, Oppenheim & Slessinger, 117 Battery.

Some of the special advantages of the mode of manufacture described, are that the boots never rip nor leak; they are smooth inside as there are no nails to hurt the feet. They keep their shape longer than other shoes, and the screw greatly increases the wear of the sole. As the screw is turned into the sole in the same manner that a screw is turned into wood, it cannot start while being worn. The different parts are firmly compressed together, while the screw is turned in, thus making it water-tight. The upper is not weakened by having so many holes made through it as in pegged shoes, and they are not effected by heat, cold, dryness or moisture.

Men's, women's and misses' shoes and boots are made in all styles. People who want a good durable article should call on their shoemakers for this make, and if they don't keep them on hand go to another place where they do. These boots and shoes bear the stamp in the sole (Standard Screw Machine), so that it is no trouble to prevent any spurious article being palmed off for the genuine one. If parties in the country cannot get them of their dealers, they can send their measure direct and get the shoes here. Retailers are now generally keeping this class of goods on hand, however, as their character for durability and strength is becoming known to the public. The manufacturers, knowing the demand, are purchasing the machines for manufacturing by the method described.

BONE MEAL FOR STOCK.—*The Indiana Farmer* says that most farmers have noticed that in fattening swine, especially when they are crowded rapidly, they always appear weak in their hind legs, and sometimes lose the use of them entirely. An intelligent farmer says that he and his neighbors have made a practice in feeding bone meal in such cases, and find that a small quantity mixed with the daily feed will prevent any weakness, and strengthen the animals so as to admit of the most rapid forcing. As bone meal is known to be a preventive of cripple ail, and weakness in cows, it looks reasonable that it should also be a benefit to hogs, which are often confined to a diet containing but little or no bone-making material. The benefit of feeding bone meal to poultry is recognized by all breeders.

HONORABLE AWARDS.—*The French Academy* has just made its annual distribution of prizes for virtue. The winners are the Abbe Roussel, founder of the Auteuil Refuge, and Mdle, Aimée Milcent, a lady who for 40 years has devoted herself to tending the sick and improving the moral condition of the children of an obscure commune in the Vendee.

At a Cabinet meeting, Nov. 5th, it was unanimously agreed that the President's message should recommend increase in weight of the silver dollar, or diminution in its coinage, or both.

A LARGE amount of Spanish gold coin has been found beneath the old mission church at San Gabriel, Los Angeles county.



Town versus Country.

Give me your hand, my burly farmer,
We shall never disagree,
Though I know you love the charmer
Who is all the world to me.

She has told me all her sorrows,
She has told me dreadful deeds,
Of your strolls among the furrows,
Of your love among the swedes;

How you stood in hobnailed glory,
With you gun upon your arm,
How you told the ancient story,
How you proffered heart and farm;

So she knows you're sentimental,
And she grieves she must refuse,
And she begged me to be gentle
When I broke the bitter news.

If in dreams the joy-bells jangle,
You must chase the dreams away,
And forget your heart is mangled—
There are worse ills every day.

For she doats on the piano,
And she cannot milk the cows;
And you're partial to guano,
And the double-furrow plows.

Burly friend, the ice is broken,
We are sure to meet again,
You'll forgive me if I've spoken
Any word to give you pain.

And, believe me, time will soften
All the roughness of the blow;
And you'll come and see us often,
When you're up for cattle show?
—Darling Downs Gazette.

Sensational Literature.

[Written for the RURAL PRESS by PHILMORE.]

We cannot accuse the RURAL PRESS of being at all sensational; on the contrary, it is not just a little too tame for the million? Is it expected because it is the RURAL PRESS that it is to be read only in the rural districts and by the rural people, who delight in agriculture only? or it may be horticulture or any other culture but the culture of the mind, which has hitherto been thought of secondary importance in connection with successful farming. For more than half a century scientific or common sense farming has been advocated by all agricultural papers throughout the United States. Not the theoretical, impractical sort, but the real, bona fide, thorough kind, that would yield wealth to the farmer and not impoverish the land. But what has this to do with sensational literature?

Ever since the first writer of fiction attempted the sensational it seems to have been the goal aimed at by all scribblers, and it has been carried to such extremes, that it does not retain that zest it formerly had. But it is so well understood that it rather nauseates than whets the appetite of the reader. It is none the less so when exhibited upon the stage. The time was when the unreasonable and improbable were the cards to draw, but that era seems to have passed, as late efforts at our different theaters have proved. Not long since a modest company came amongst us unheralded, and took a "played out," unpopular theater, and produced some scenes from real life that were recognized by all. Simple and unpretending in themselves but truthful and therefore interesting to the thousands that flocked to see it during its unprecedented run of ten weeks to increasing audiences, while our great and popular playhouses were running the sensational extravaganzas to empty benches. This goes to prove that all the tinsel, claptrap and Munchausen effects cannot compete with quiet representation of everyday life.

Our newspapers are too much filled with such to the exclusion of more reasonable and useful matter, and to the absolute injury of those whose weakness or instincts incline them to the marvelous. It must even be that while the wiser may laugh and ridicule the absurdities of sensational stories the weaker minds are differently affected, and in time they become diseased, as has often been demonstrated, where boys and girls have constantly read the trashy novels of the day. While they cannot passably do any good since sensible people will not waste their time reading them, they assuredly do much harm by falling into the hands of the young and the unsophisticated who are certainly demoralized by them.

Now there is style of writing which elevates and ennobles and that is true to nature, illustrating every-day life in a way that cannot but please and entertain. Some of the facts of every-day life are quite exciting enough. What ever is historical should be truthfully portrayed, but in romance that which excites to demoralization should be avoided. There is much in real life that it would be well to draw the curtain of obscurity before, but to subserve the end of justice, it must often be exposed.

When DeFoe wrote "Robinson Crusoe" he struck the popular cord, and ever since authors have been aiming in the same direction, until real romance has been lost in startling scenes

and impossible situations. And that is what the ordinary reader expects, instead of truth or something reasonable, that might have been truth. The writer that shall succeed in making interesting and popular another style of literature, will deserve a monument as lasting as the old masters, who first fed our fancy upon the wonderful in fiction that did not debase and corrupt, but made the world wiser and better. True, some of the earliest writers were not over careful as to the selection of their subjects or of the manner of their treating them. Many were even coarse and vulgar, but we do not believe their writings were so productive of mischief and immorality as the modern insinuating style of the sensational writer, which leaves for inference what never could happen.

It seems to matter little with some papers how immoral a story may be so that it is read. All are striving for notoriety and gain to the exclusion of all else, so that they keep within the bounds of the law. Now, there is no particular reason why an agricultural paper should not get out of that old beaten track of trying to interest everybody in farming and gardening, for, depend upon it, there are thousands that know nothing about either, and care less. Give them something else, tell them a story, sing them a song, or do what was done in the RURAL of the 2d inst., give them a picture and description of a house (and, by the way, the editor succeeded so well in that, it will be well for him to try again). "Our House in Berkeley" is good, and the remarks appropriate and sensible; but we digress.

Has it ever occurred to the reader the amount of time he or she has wasted in trying to get at something exciting in one of the long-winded novels of the day. The good things have been looked for in vain, or if found they were like a kernel of wheat in a bushel of chaff. They seem to have been designed and written, as doubtless many of them have, for so much a line, and it did not matter much what the lines consisted of. Yet such books are laid before us and receive favorable notices of the press, which must be the *quid pro quo* they give for the, in many instances, worthless volumes they receive. There may be something good in every book that has been written within the last 50 years, but it requires so much time and patience to find it in some of them that it were better if it had never been written. It is not alone the trashy novels of the low order, but those by celebrated authors as well that we condemn. For instance, what is there in "Daniel Deronda" except the popularity of the author of "Adam Bede" and "The Mill on the Floss" to warrant its great demand. What is there in it? What do we learn from it? And yet some infatuated people have been found to praise it and assert it to be one of that writer's very best works. We can only say their taste and our own does not agree. Another work popular at the time by Dr. Warren entitled "Ten Thousand a Year," almost a winter's reading, and what did we enjoy or learn? Simply of a contemptible puppy, the tool of dishonest men, and of the men themselves, that celebrated law firm of "Quirk, Gammon & Snap," and yet the author made a reputation and fortune by the above work. And so by that most fascinating of all romances, "The Count of Monte Cristo," by Dumas. Painful from beginning to end and most unreasonable of all. It had its day and made its author famous and fevered the minds of untold thousands, causing them to neglect the important duties of life to chase the *ignis fatuus*.

[There is much of what our correspondent says about sensational literature that we heartily approve. It has always been our aim to exclude this style of composition from our columns, and our readers give us much credit for succeeding in this line. We cannot entertain the idea of making our paper any less an agricultural paper or any less practical or valuable in the matters concerning actual farm work in California than it is. Our "Home Circle," however, always welcomes a "touch of nature" and the truths of living. But our calling comes from those interested in agriculture. Here are our sympathies and here must our best work be done. But while we are thus actuated, we do not forget that there are responsibilities placed upon us for moral and mental culture, and while we strive continually to aid farmers in their efforts for farm improvement we are not less interested in the fact that the better the farmer the better should be the man, the woman, the children in rural homes.—EDS. PRESS.]

PLANTS AS AIR PURIFIERS.—Mr. Girdlestone says, in a little pamphlet lately published: "If a number of flies be placed in a glass case (such as an aquarium), with plenty of sugar to feed on, and the case be then made air tight, they will in a few days have so poisoned the air with their breath that they will die. But if some living plants, as well as sugar, are shut in with them, they will continue to live for months, with active appetites and in perfect health; the plants removing the carbonic acid and ammonia (both of them poisons to animals), and returning to them pure oxygen and nitrogen instead."

A BOSTON young man married against the wishes of his parents, and in telling a friend how to break the news to them, said: "Tell them first that I am dead, and gently work up to the climax."

Ourselves and Others.

The world, with all its flowers, sunshine and beauty, has its thorns, its clouds and deformities, and among them a portion of every life must be passed. After the gentle spring, radiant summer and gorgeous autumn, comes the dreary winter, with its whistling, cutting winds and cheerless storms. Following the beautiful morning with its dancing sunbeams and laughing flowers, the shadows of the night steal over the brightness and the bloom, and cloud it as the face of death clouds the germ of life. There is no spot but heaven where the shadows fall not—there is no bed but the grave on which the heart is not liable to ache. Human character is tempered by the storms of life, and strengthened by the weight of its clouds. The heart beats heavily through the midnight of despair that wind their blackness about it, but when the morning comes it throbs more strongly, and drinks in the beauties of the sunshine with a purer relish than it would had the night been cloudless and faultlessly beautiful. These clouds and gloomy hours, and barren deserts in the midst of life's blooming loveliness, therefore, are a part of divine economy, and none of us can hope to escape them. Every soul experiences the hither that accompanies the sweets of life. There is some sort of a skeleton in every home—there is some sort of a shadow upon every heart. We see the shadows that fall upon our own pathway, but cannot always see those that cloud the beauties of the flowers that bloom upon our brother's, yet they are there. Walk through the crowded thoroughfares of our great cities and observe the thousands of faces that pass you on the way. On almost every one care, anxiety or sorrow has left its impress or is casting its shadow. The crape may be hanging on the door-knob at home—the star of the household may have set here, and though glowing in heaven, the heart that is left behind is bleeding in inconsolable sorrow; life's effort may have been futile, and memory is treasuring up the crushing failures, which the mind is unable to explain, loved ones may have wandered off into the dangerous by-ways of life where the snares were numerous and the pitfalls thick; it may have been brother, father or sister, and their disgrace rests like a mountain's weight upon the soul that loves them; the world may have been cruel and oppressive and unappreciative; it may have misunderstood the motives that prompted the best of actions—it may have misunderstood the actions; slander may have licked the soul with its scorching tongue, and left wounds which the halm of eternity alone will heal. We do not know what the heart contains that cast these shadows that cloud the brow and wear the crimson blushes from the cheek, but we see the shadows, as this vast army of busy humanity tramps over the pavements of the streets. Most of them look as if a warm handshake and a kind word would be welcome. It matters little from what home they come. It may be the humblest cottage in which the plainness of furniture and dress bespeak the presence of poverty, or it may be the elegant palace where velvet carpeting and heavy draperies speak of wealth, and the paintings upon the walls and the statuary upon the pedestals speak of culture. It matters not what the homes are like, the people look as if they would pause instantly, if a friendly hand should be extended, and a kind, sympathizing voice should say: "I can tell you how to be happy." If this vast mass of humanity that surges about us could be made to believe that any one could teach it to be happy, could lead it where the flowers always bloom and the sunbeams always dance, it would weep with joy, and listen with a devoted attention that no melody could secure. It is happiness that every man and woman in the wide world is seeking. In the wild rush for wealth happiness is the ultimate object; in the whirlpool of exciting pleasure happiness is the aim; even in vice and debauchery it is happiness that is sought. But men and women do not find it. The merchant looks over his hooks, but when he has done, there is an aching void in the heart that balances cannot fill, and a craving which riches cannot satisfy; the aspirant for fame sits down on the side of the mountain up which he is climbing, or on the summit which he has reached, and weeps as his soul writhes under its pains, or hungers for something which fame cannot give. The woman pauses in the giddy dance, and sighs for something else and something better. The votary of vice struggles in his chains and mourns the futility of his attempt to find roses where roses never bloom. And thus the world sighs and weeps and despairs.

Amidst this universal gloom human sympathy is like the rising of the morning sun. It warms the drooping bopes into vigor, the fading flowers into bloom. A sympathetic word or tear is never lost. Such an exhibition of fraternal interest has often borne harvests that are now ripening in the sunshine of eternity. We are too dependent for our own happiness upon the gentleness and kindness of others to lock our hearts, and prevent the streams of love and sympathy, of which exhaustless fountains sparkle in every breast, unless our own selfishness has frozen them, from flowing out, sparkling with the reflection of that fraternal goodwill that flowed in crimson torrents on Calvary, and falls like summer showers from the Throne of God. Be sympathizing and gentle and considerate. The world is a vast house of mourning. The funeral train is ever approaching the yawning grave, and hearts are throbbing heavily as the clouds strike the casket. Tomorrow our turn will come. The loved one will

have gone and left us, and we shall be weeping beside the open grave. The soul will be sensitive enough then. It will then be ready to say: "Come, child of misfortune, come hither, I'll weep with thee for a tear."

—Western Rural.

Agriculture.

The great men of all time have ever sung the praises of agriculture. Lord John Russell wrote: "In a moral point of view, the life of the agriculturist is the most pure and holy of any class of men; pure, because it is the most healthful, and vice can hardly find time to contaminate it; and holy, because it brings the Deity perpetually before his view, giving him thereby the most exalted notions of supreme power, and the most fascinating and endearing view of moral benignity." Swift, in his oft-quoted sentence, puts it thus, "that whoever could make two ears of corn, or two blades of grass to grow upon a spot of ground where only one grew before, would deserve better of mankind, and do more essential service to his country, than the whole race of politicians put together." Lord Chatham states that "trade increases the wealth and glory of a country; but its real strength and stamina are to be looked for among the cultivators of the land." Our own poet Whittier, with his familiar verse, thus beautifully expresses the position of the husbandman:

Give fools their gold, and knaves their power,
Let fortune's bubbles rise and fall;
Who sows a field, or trains a flower,
Or plants a tree, is more than all.

For he who blesses most is blest;
And God and man shall own his worth
Who toils to leave, at his bequest,
An added beauty to the earth.

And, soon or late, to all that sow,
The time of harvest shall be given;
The flower shall bloom, the fruits shall grow,
If not on earth, at last in heaven!

Education.

Education does not commence with the alphabet; it begins with a mother's look; with a father's nod of approbation, or sign of reproof; with a sister's gentle pressure of the hand, or a brother's noble act of forbearance; with pleasant walks in shady lanes; and then come the bloom and buoyancy and dazzling hopes of youth; the throbbings of the heart, when first it wakes to love, and dreams of happiness too great for earth; when woman with her grace and gentleness, and fullness of feeling, and depth of affection, and blushes of purity, and the tones and looks which only a mother's love can inspire—and these are only a small part of our education.

Our education will only be finished with our lives; day by day we learn by sad experience some new phase of humanity; learn that the friend in whom we placed implicit confidence is unworthy of it—learn that all is vanity and vexation of spirit. Our education teaches us that man was made to mourn; that disappointment is the lot of man and woman. It teaches us how to fight the battle of life, but alas! it does not always teach us how to fight it successfully. The knowledge that is gained from books we would not undervalue; but it is worthless unless we combine it with actual experience of life. Pythagoras said if he did not, when night came, feel that he had learned something through the day, he felt that he had lost a day. Reader, every day of your existence should be to you so much gain; and as we grow old and decrease in physical strength, we should increase our mental resources. We have acquaintances to-day who have learned nothing by experience; whose education is no more advanced than it was twenty years ago, and we can but think that they have lived a fruitless life. Education begins with our birth and ends with our death.

COMMON SENSE PUBLICATIONS.—We are informed that a contract has just been signed by Messrs. Claxton, Remsen & Haffelfinger, publishers of Philadelphia, and a well-known editor and author, for the preparation and publication of a series of books suitable for counting-house libraries, to be known as the "Business Library Series." The leading object of this Series is to collect together for the benefit of the young, the "learning touching negotiation or business" which Bacon deplored had not been reduced to writing, and consequently men must spend half their days in finding out what they should have known in the beginning. These volumes will be of convenient size, of about 400 large 12mo. pages each, and though prepared by different authors, will be under one editorship. One of the volumes, entitled "Common Sense in Business," by Edwin T. Frebley, will be issued early in September; and this will be followed by another entitled "Home Comforts, or Things Worth Knowing in every Household," in which young wives are instructed how they may save, by good management, a portion of the money the other teaches their husbands how to earn. These books are certainly needed in these times.

A PIGEON LIVING WITHOUT A BRAIN.—Dr. McQuillen recently described before the American Philosophical Society a case of the extirpation of nearly the whole of the cerebrum of a pigeon, operated upon by himself. He desired to place on record the fact that the animal not only survived the operation 24 days, but that it gradually regained its usual powers and habits of flight, and its ability to feed itself and drink. Only one other such case is on record.

Chaff.

IN the make-up of the modern small boy there is altogether too much whistle for the amount of boy. It's most too much like using a two-quart funnel in a three-ounce vial.

A MINNEAPOLIS cat has achieved a kitten with five heads, and we can imagine how sweet it will be when that cat attains its majority, to have it sit on the back fence and commune with itself.

ARTHUR (who has been listening with breathless interest to one of grandpapa's Bible stories): "And were you in the ark along o' Noah and the rest of 'em?" Grandpapa (indignantly): "No, sir. Certainly not!" Arthur: "Then how was it you wasn't drowned?"

OUR village grocer (great floriculturist): "Most extraordinary thing, sir; last year I had some bacon in my shop that went bad durin' that hot weather, and I buried it in my garden. You'll hardly believe it, but all my asters this season come up streaky."

A TUTOR of a college lecturing a young man on the irregularity of his conduct, added with great pathos: "The report of your vices will bring your father's gray hairs with sorrow to the grave." "I beg your pardon, sir," replied the pupil, "my father wears a wig."

JONATHAN and Paddy were riding together one day, when they came in sight of an old galloos. This suggested to the American the idea of being witty at the expense of his Irish companion. "You see that, I calculate," said he, "and now where would you be if the galloos had its dues?" "Riding alone," coolly replied Paddy.

A NEW ENGLAND scene. Grand old hills, pine clad and scarred, towering to the clouds in their majesty, gurgling brooks winding through green meadows, fields of corn with the breeze waving and rustling their ripening heads and floating streamers. Winding around and through these a stretch of yellow road, silent in the glare of the sun. On the road a solitary potato bug, toiling laboriously eastward.

AMONG other curiosities on exhibition at the American department of the Paris exposition was a spring chicken from a New York boarding-house. The chicken was taken to the guillotine one morning, but when the heavy knife fell on its neck the fowl gave a frightened squawk, and after one or two tremendous pulls jerked its head away from under the knife and made its way back to its coop in the exposition. The knife was sent to the foundry for repairs.

SOME months ago the Lord Bishop of—came to this country on a visit to the Rev. Dr. —of the Episcopal Church of New York. The doctor instructed a colored boy in his service to knock at the bedroom door of the Lord Bishop early in the morning, and say, "My Lord, the boy." Accordingly the next morning the boy, somewhat dazed by so much grandeur, knocked at the Bishop's door, who called out: "Who is there?" the boy responded: "The Lord, my boy."

THE OLDEST MAN IN THE WORLD.—The *Lancet* says: "The stories of men whose age is considerably over a hundred generally come from districts in which verification is impossible. Never, perhaps, even from such districts, has a candidate for the age of one hundred and eighty years been presented, but one is offered for our credence in the person of a citizen of Bogota in San Salvador. We are told that he only confesses to this age, but his neighbors, who must be better able to judge, affirm that he is considerably older than he says. He is a half-breed named Michael Solis, and his existence is testified to by Dr. Hernandez, who was assured that when one of the 'oldest inhabitants' was a child this man was recognised as a centenarian. His signature, 1712, is said to have been discovered among those of persons who assisted in the construction of a certain convent. Dr. Hernandez found this wonderful individual working in his garden. His skin was like parchment, his hair was as white as snow, and covering his head like a turban. He attributed his long life to his careful habits—eating only once a day, for half an hour, because he believed that more food than could be eaten in half an hour could not be digested in twenty-four hours. He had been accustomed to fast on the first and fifteenth of every month drinking, on those days, as much water as possible. He chose the most nourishing foods, and took all things cold."

SWIMMING FOR GIRLS.—We are glad to learn that a vigorous effort is being made to institute classes for teaching girls to swim. It is possible that proprietors of baths might be willing to give up the use of their establishments for two hours a day for this purpose. There is no reason why such a movement should not have been organized long ago. Women and girls are just as likely to be proficient swimmers as men and boys, and quite as capable of enjoying the healthful exercise. The gentler sex, too, are probably placed as often in circumstances of danger as the sterner, without possessing the same means of combating disaster, as the records of river and seaside accidents bear only too ample and melancholy witness. Mr. John Macgregor ("Rob Roy") has advocated the cause of the girls, and we trust that his appeal may meet with the success it so well deserves. Already, he says, "hundreds of girls in London are learning to swim, but many hundreds more would gladly learn if teachers could be had;" and he instances a class of thirty whose instruction began late last season, of whom twenty-five learned to swim in six lessons, and six won prizes.—*Cassell's Family Magazine*.



WHY DON'T THAT TRAIN WAIT FOR ME.

Young Folks' Column.

What Three Little Children Did.

A boy not over 11 years old, whose pinched face betrayed hunger, and whose clothing could scarcely be called by that name, dropped into a carpenter shop on Grand River Avenue the other day, and after much hesitation explained to the foreman:

"We want to get a graveboard for ma. She died last winter, and the graves are so thick that we can hardly find her's no more. We went up last Sunday, and came awful near not finding it. We thought we'd git a graveboard, so we wouldn't lose the grave. When we thought we'd lost it, Jack he cried, and Bud she cried, and my chin trembled so I could hardly talk."

"Where's your father?" asked the carpenter. "Oh, he's home, but he never goes up there with us, and we shan't tell him about the board. I guess he hated ma, for he wasn't home when she died, and he wouldn't buy no coffin nor nothing. Sometimes when we are sittin' on the doorsteps talking about her, and Jack and Bud are cryin', and I'm remembering how she kissed us all afore she died, he says we'd better quit that or we'll get what's bad for us. But we sleep up stairs, and we talk and cry in the dark all we want to. How much will the board be?"

The carpenter selected something fit for the purpose and asked:

"Who will put it up at the grave?" "We'll take it upon our cart," replied the boy, and I guess the graveyard man will help us put it up."

"You want the name printed on, don't you?" "Yes, sir, we want the board white, and then we want you to paint on that she was our ma, and that she was forty-one years old, and that she died on the 5th of November, and that she's gone to heaven, and that she was one of the best mothers ever was, and that we are going to be good all our lives and go up where she is when we die. How much will it cost, sir?"

"How much have you got?" "Well," said the boy as he brought out a little calico bag and emptied its contents on the bench. "Bud drewed the baby for the woman next door and earned twenty cents; Jack he weeded in the garden and earned forty cents, and he found five more in the road; I run on errands and made kites, fixed a boy's cart and helped carry some apples into a store, and I earned sixty-five cents. All that maked a hundred and thirty cents, sir, and pa don't know we've got it, cause we kept it hid in the ground under a stone."

The carpenter meant to be liberal, but he said: "A graveboard will cost at least three dollars." The lad looked from his little store of metals to the carpenter and back, realized how many weary weeks had passed since the first penny was earned and saved, and suddenly wailed out:

"Then we can't never, never buy one, and mother's grave will get lost."

But he left the shop with tears of gladness in his eyes, and when he returned yesterday little Bud and Jack were with him, and they had a cart. There was not only a headboard, but one for the foot of the grave as well, and a nater and carpenter had done their work with full hearts, and done it well.

"Ain't it awful nice—nicer than rich folks have?" whispered the children, as the boards were being placed on the cart; won't the grave look nice, though, and won't ma be awful glad?"

Ere this the mother's grave has been marked, and when night comes the three motherless ones will cuddle close together and whisper their gratitude that it cannot be lost to them even in the storms and drifts of winter.

Good Health.

Poisonous Tin Plate.

The *Boston Journal of Chemistry* after commenting upon the many hidden dangers that surround us in our daily life, goes on to say:

Attention has recently been called to a new risk of chronic poisoning by the old enemy, lead. What we call "tin" vessels—that is, sheet iron coated with tin—are in daily use in every household in the land. They are cheap, durable and convenient, and have been considered perfectly safe for the thousand culinary purposes to which they are devoted. They are safe if the tin-plate is honestly made; but unfortunately this is not always to be counted upon. Tin is comparatively cheap, but lead is cheaper; and an alloy of the two metals may be used in place of the dearer one, with profit to the manufacturer though with serious detriment to the user. The alloy is readily acted upon by acids, and salts of lead are thus introduced into food. The Michigan State Board of Health has lately been investigating this subject, having been led to do so by a letter from a physician who found that certain cases of what had been taken for chorea were really *paralysis agitans*, which could be traced to this kind of lead poisoning. Other cases were brought to light in which children had died of meningitis, fits and paralytic affections, caused by milk kept in such vessels, the acid in the fluid having dissolved the lead. Malic, citric, and other fruit acids are of course quicker and more energetic in their action upon the pernicious alloy. The danger is the greater, because lead salts are *cumulative* poisons. The effect of one or two small doses may not be perceptible, but infinitesimal doses, constantly repeated, will in the end prove injurious, if not fatal.

Analysis of a large number of specimens of tin-plate used in culinary articles showed the presence of an alloy with lead in almost every instance, and often in large quantities. It is safe to assert that a large proportion of the tinned wares in the market are unfit for use on this account.

That we may not be accused of exciting fears which may be groundless, we will inform our readers how they can settle the question for themselves by a simple and easy test. Put a drop of strong nitric acid on the suspected "tin," and rub it over a space as large as a dime. Warm it very gently till it is dry, and then let fall two drops of a solution of iodide of potassium on the spot. If lead is present it will be shown by a bright yellow color, due to the formation of iodide of lead.

It is stated by Dr. Kedzie that a peculiar kind of tin-plate, the coating of which is largely made up of lead, is coming into general use for roofing, eaves-troughs and conductors; and it is suggested that much of this lead will eventually be dissolved and find its way into household cisterns. Susceptible persons may be poisoned by washing in the lead-charged water, and all who drink it, even after it is filtered, are in danger of chronic lead poisoning. There is also risk in the use of glazed earthen vessels, if, as is often the case, the glazing contains oxide of lead. The danger in the use of certain enameled iron vessels was pointed out some time ago in the *Journal*; and it is said that these poisonous wares have not entirely disappeared from the market.

An account is given of a man who tore his diaphragm loose, and, as might be expected, died immediately after, by stuffing himself with potato-soup, tea and milk, and then taking to promote digestion, a good-sized dose of bicarbonate of soda.

DOMESTIC ECONOMY.

Good Living for Farmers.

If there is any class of people that ought to live well it is farmers. They are supplied with a great variety of food, and among the numerous products of the farm and farm garden are many articles that would be regarded as the choicest luxuries by city people—luxuries because of their freshness and purity. Such milk and cream as the farmer has, money cannot buy in our cities. Eggs fresh laid are not to be had there. Vegetables fresh from the soil; chickens as choice and as fat as you please. These are among the generally supplied and choice products of the farm which should aid in making the farmer's table an attractive one.

The staple articles of diet are of course bread, potatoes and meat of various kinds. But these articles can be made so good that no one will tire of them, and cooked in such a variety of ways as to always render them inviting and palatable. Some people have an idea that good living necessarily means expensive living, and that the farmer can afford only plain food plainly served, which generally means poorly cooked. What a poor slovenly cook wastes in providing for an average farmer's family would go far in the hands of an intelligent, careful and economical cook, toward feeding such a family. One of the greatest shortcomings in our country to day is in the vast amount of careless and unintelligent cooking. Farmers are taking lessons in agriculture. They are studying and investigating the many questions which are constantly arising in their old but always new business of tilling the soil. Their wives and daughters have need of thought, of study and earnest investigation into the economic principles of cooking. Of course, there are very many accomplished housekeepers and excellent cooks as there are many model farmers, but the best are generally those who can and will profit most by study, experiment and the suggestions of others. The wise are never too wise to learn, but the foolish are wise in their own conceit. The best farmers as a rule are the ones who take the agricultural papers, who are supporters of the Farmers' clubs, Grangers' and Agricultural societies that are doing so much good. So the best cooks are the ones who are the able to make good use of cook books, carefully selected recipes, and who take an interest in everything that tends to increase their knowledge and proficiency.

Economy in living expenses is becoming an important consideration with our people, but economy does not require that we go half starved, nor that we live all the while on one or two kinds of food, served always in the same way. It requires that more intelligent care be given toward the selection of articles of food, having regard for the relation of value and cost, and that they be so prepared that nothing will be wasted, and that the greatest good may be derived from them.—*Husbandman*.

How to Kill Mosquitoes.

EDITORS PRESS:—When they are on the wall take a lighted caudle and, holding it above them, carry it toward the wall where they are resting. As the light approaches them lower it gradually, until the flame is just in front of the mosquito; then push it towards the wall, until the mosquito springs into the flame and is destroyed. With care in adjusting the light, they will almost invariably be caught in the flame.

If the candle is brought toward them from beneath, they will feel the heat and escape. If they are on the ceiling drive them off, and attack them when they light on the walls.

This method is quick and sure, and leaves no stain on the wall. It can be done also inside of mosquito nets, taking proper care not to bring the light in contact with the sides or too near the top. Try it. HENRY LOOMIS.

San Rafael, Cal.

PARSNIP FRITTERS.—Boil six medium sized parsnips until tender, then mash them smooth with a lump of butter and pepper and salt to taste. Add two beaten eggs, three even tablespoonfuls of flour, and half a cupful of sweet milk. Heat some nice drippings and a little butter in a frying-pan and drop the mixture by teaspoonfuls into the hot fat. When nicely browned on both sides, lay them on whitish brown paper folded in a plate, and set them for five minutes in the oven, then serve on a hot dish in which is laid a folded napkin, and garnished with curled parsley.

SCOTCH BROTH.—Remove the fat from a gallon of meat-broth; that in which any meat, either salt or fresh, has been cooked will answer. Mix half a teaspoonful of oatmeal into a smooth paste with a little of the liquid and add to it a small onion chopped fine. When the broth is boiling, stir in the paste; season to taste with pepper and salt and boil for 20 minutes, stirring occasionally to prevent lumping and burning.

MILK CUSTARD.—One pint new milk; one tablespoonful of flour; one tablespoonful of thick cream; cinnamon; almond-flavor, and sugar. Set the milk over the fire with a little cinnamon stirring till quite hot, not allowing it to boil. Mix the cream and flour together; pour on the hot milk; stir well, adding the almond-flavor, and sugar. Bake lightly, without crust, in a moderate oven.



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SAN FRANCISCO:

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The Week.

Again we have had a group of open days and are presumably thus much nearer the coming of timely rains. If they do not soon appear, the croakers opportunity will come again and the State will resound with the note of the raven. Meantime field work has progressed, the smoke from stubble fires has still waved obedience to the placid moon, and the plow and cultivator have followed the sun upon the ashes of stubble straw and weed stems. Much work has been done upon the roadways in places where gravel was at hand to cure the winter's depth of mud, and altogether the favoring days have been turned to good account in both public and private enterprise. The beautiful air and sun have drawn out full cohorts of hunters, and the popping of their weapons by day, and under the soft moonlight as they lay beside duck-frequented waters, has been rather a peppery infusion in nature's harmony.

Still the country is in alarm at the work of the troublesome tramp. Fires of stored grain and of splendid barns full of stock and implements continue in different parts of the State. Determined officers are now trying to reduce the evil as we suggested two weeks ago, and gangs of tramps are passing behind the bars as vagrants. Six were committed in one day in the lower part of Alameda county, and in San Jose 14 were taken from a single barn and all convicted of vagrancy. Many have assured us that they would rather pay their share of the board of the floating element than to live in fear of losing life and property. It seems to us that these men have already wrought evil enough against the industrious.

Consolations for Small Farmers.

The subject of agriculture upon small areas is now, and long will be, one of uppermost importance in this State. All theorists favor the small farm, and the amount which some of them figure out as possible to be produced upon the sunny side of a gopher hill, is wonderful. All practical men do not approve the idea of a small farm; partly because some of them are used to systems and methods of culture which cannot produce a living for a family except by the use of quite a large number of acres, and they are right from their point of view. The fact is too often lost sight of, that large and small farming are essentially different branches of the same industry, and require different lines of skill, and different kinds of persistence in applying it. Of the qualifications for success in large farming we do not propose to speak, except to remark, that when a man is boring with so large an auger that the edges of the hole are out of sight, it is no small job to keep on the line. With small farming there are other problems, and if the gimlet does not split the shingle, there is still a chance that the handle will pull off and leave the tool sticking in the wood like Saul's javelin.

In this issue of the PRESS, two correspondents approach the small farm from different sides. One comes up through the field, and notes the crops which he has woven into a staff of support, so that if the balance of creation should be blotted out, he could survive upon his narrow, fertile and versatile domain. Another correspondent, leans over the fence of a leisure afternoon, and gives us an interesting discussion of the ethics of small farmers and the antics of some of the rest of creation. Each of these writers, in his own way, has brought forward something of value in the problem of life upon a small farm, which is now receiving the attention of many people.

To us there are many charms about the lesser agricultural enterprises. It is true, one loses the distinction of owning townships, and the sensation of immensity which attends book-keeping with sums of four or five figures; but if good things are in reduced amount, evil ones are apt to be reduced in much greater proportion, if the man is wise and economical. Whether the small farm be managed on one of two central ideas, either the production of nearly everything needed for home consumption or the production of some special crop which commands high price, there is chance for the exercise of much ingenuity and the employment of generalship which is full of gratification.

It is true there are hardships, and these our Sonoma correspondent points out forcibly. The struggle must be full of the personality of the victor. He must rely largely upon his own labor. Not for him are the great triumphs of the agricultural implement maker, but in his smaller ways there are many needs of mechanical aid, and if he has "knack" he can often help himself to do two days work in one. The whole policy of a small farm depends, to a great degree, upon the personal quality of the farmer, and, excepting disasters beyond his control, each year's success or failure will be to a considerable extent the measure of the man. Upon a small farm the man is, in truth, the architect of his own fortune and his own character. If he be a skillful builder he will have a fortune, which, though small it may be, will be all good metal and untarnished by the shades of wrong, which many larger fortunes have, and his character, built up literally by "days work," in the sight of the community, will hold him firm in public esteem, when other flashier characters, made as it were "by contract," show shaky timbers.

There is a grand field for the growth of thousands of small farmers in this State. The soil needs them to demonstrate its power. Agriculture needs them to nestle down firmly together and act as vertebrae; she has swinging arms and far-reaching legs in the large, productive enterprises which are under way, and she needs a good permanent backbone of kindred interests to make her growth secure. The State needs thousands of these wide-awake and progressive, yet wise and incorruptible small farmers, to oppose an unbroken opposition to the wild schemes of every shade of evil from communism to monopoly, which are now being vigorously propagated. And the hope for the future lies in the fact that we are going to have these thousands of solid "little men"; our ex-

periment with "great men" has not been altogether satisfactory. We are sure of the new acquisition to our citizenship, because of the number of small places which we see developing as we pass through the country in nearly all parts of the State. It is also assured by the sales made by those who are dividing up their large ranches. It is a good work; let it go on. We shall always be pleased to receive from our readers any statements which will promote the development of the small farm.

QUERIES AND REPLIES.

The Ins and Outs of The Honey Trade.

EDITORS PRESS:—While in Europe last, it was a part of the business in hand to gather data essential to producers of all possible staples on the Pacific coast. My facilities for arriving at definite conclusions on this and kindred subjects were unequalled. Referring to Mr. Kenny's communications, it is apparent that the writer is "away back" in his information upon the "laws of trade" (a phrase of which the plain English is stealing). The whole business of honey, as well as many other commodities, falls into the hands of persons who watch the "corners" for a living. This is all the explanation required by those who keep up with this "fast" age, and especially the fastest country on earth, California. Acquaintances of ours have shipped honey abroad, and obtained paying prices; but that is not the point. The information required is, how to make the honey, or any other crop, average a fair price. In the case of honey, the producers have, in many instances, been the poorest of the poor, and there is no one knows this fact better than these "cornering" gentry. This knowledge is constantly acted upon in the manipulation of the honey crop on this coast in most instances. Whenever the producers of honey are all able to hold their stores of the best staple sweet known, fair prices will be always available. Not otherwise.—S., Los Angeles, Cal.

There is doubtless much truth in what our correspondent says of speculation being carried on, upon the fact that many honey producers are forced to sell. He is, however, somewhat original in his use of the term "corner." A thing is cornered when it passes into a few hands, and is held above the market rate. The price of a cornered product goes up rapidly. Perhaps there could not be anything better now for those who have honey to sell, than that some one should make a corner in the goods. Holding the honey until a fair price can be obtained, as our correspondent advises, is itself a form of cornering, and a praiseworthy one. In fact, the market needs just such a "corner" to meet the machinations of those who use all their power to "bear" the price when producers must sell.

Orange Scale Insect.

EDITORS PRESS:—Please examine the leaf and branch of an orange tree which has been infected with a parasite. Several hundred trees were set out last year; those that were not troubled with these insects, grew a third more than those that were. The orchard is owned by General Williams. Since I have wrapt sacks around the base of the trees to keep the rabbits from them, they are growing finely. Those parasites may return next season, therefore, I seek a remedy. How would carbolic soap dissolved in water do, if used with a syringe?—L. RAYMOND, Kidd Ranch, via Ellis, San Joaquin Co., Cal.

Our querist has the old pest of our orange growers, the "scale-bug." Carbolic soap suds will do much good if applied with a syringe to the leaves, at the time the young insects are hatching out and moving about. It is also of value if applied to the trunks and branches of the trees with a vigorous brushing with a stiff scrubbing brush, so as to loosen the scales and permit the soap solution to reach the eggs. According to latest experiments, kerosene oil is the most effective dose for scale insects on orange trees. As was described in our paper of Aug. 17th, kerosene has been applied to orange trees, out of the growing season, by drenching the leaves and twigs, and painting over the bark with a paint brush and the oil. This destroys everything of insect kind that it touches within the scale and out of it. In applying kerosene to plants generally, it must be agitated with several times its volume of water, for on some plants strong kerosene is ruinous.

Tule Paper—Low Water in Tulare Lake.

EDITORS PRESS:—Inclosed is a sample of natural tule paper from Tulare lake. Is it of any practical value? It is so plentiful that one man could easily sack one ton of it per day. The supply is inexhaustible.

The water of the lake has fallen two feet this season, or 14 inches lower than it was last year, and is still lowering at the rate of nearly one-

half an inch per day. If it continues at that rate for a month longer the outer line of tules will be above water, which will evidently be as low water as there has been in the lake during the memory of the white settler, let them say what they will, for the growth of the tules follows the receding water each year, and then continues to grow although afterwards covered with water.—C. W. CLARKE, Hanford, Tulare county.

The paper is a curious substance, but is pronounced of no value by our paper makers because it is so "weak," that is, it has no strength of fiber. There is adhesion between the particles but no defined fiber, as is requisite in paper-making material. We imagine it might be of local account for packing if better substances were not at hand, but it would not stand transportation for such purposes.

The statements concerning Tulare lake are interesting.

The Salmon Berry.

EDITORS PRESS:—I noticed an article in your last issue concerning the salmon berry, which I will try to answer. Mr. Mavity is right in some of his statements. They grow in the localities spoken of and even farther north, and I met a lady from Los Angeles county at the last Santa Clara County fair who told me that a neighbor of hers was raising them and with very good success. They do grow out in the open prairie, as anyone can see by going to Ferndale, Humboldt county, where we have them set out. They also grow on the mountains on what is known as Bear River ridge. As to their being wholly unfit for culinary purposes, I would say that they can be put up in as good shape as the blackberry, and they make the finest kind of jelly. We are canvassing for them at the present time, and have the best success selling to those that are acquainted with them in their wild state. We will favor you with some of the fruit at our earliest opportunity, and let you judge for yourself.—P. B. WASHBURN, Gilroy, Cal.

EDITORS PRESS:—Having had two seasons experience with salmon berries in Del Norte and Humboldt counties, I can endorse all that Mr. Mavity, of St. Helena, says about them. I would add that they are best when eaten directly from the bushes, and are tolerable only then, because there is no other fruit or berry procurable. They are very soft and do not bear transportation even for a half a mile, without getting into a jam. They may possibly be improved by cultivation.—V. NEWMARK, M. D., Benicia, Cal.

Handling Large Bands of Turkeys.

EDITORS PRESS:—In looking over my files of the PRESS I find very little concerning turkey raising, especially the raising of them in large numbers, as 1,000 to 2,800 in a band. Will you please give information through the PRESS how the large turkey raisers in the San Joaquin valley would proceed, say from this time of the year, with the band until marketing time next fall or winter? Do the old turkeys need shelter from the rains this winter? Turkey raisers around here say they do not and leave them out in the storms. How many turkeys or turkeys and chickens are required to raise 1,000 young turkeys? I would like to have some one reply, if possible, who has raised a large band successfully.—A. C. B., Snelling, Cal.

These points would be very interesting to many readers, and we hope some of our turkey-raising friends will write us letters embodying their experience.

A QUERY.—"A Constant Reader" writes from Amador City, asking the number of board feet in a stick of square timber, the ends of which are respectively 4x4 and 8x8 inches, and the length 22 feet. Multiply 4x4 by 8x8; extract the square root of the product; add the result to the sum of 4x4 and 8x8; multiply the result by one-third the length in feet; divide the product by 12, and the result will be the number of board feet in the stock. Thus: 8x8x4x4=1,024; the square root of 1,024 is 32; 8x8+4x4x32=112; 112x22=2,464; 2,464÷12=205.33 feet, board measure.

NOT A TARANTULA'S NEST.—At the late meeting of the San Diego Natural History Society, Prof. Kleeburger made some remarks upon the tarantula of California, and stated the distinction between the tarantula (*Mygale Hentzi*) and the trap-door spider (*Cleniza Californica*), and wished to correct the popular error that the nest with trap-door found thereabouts is a tarantula nest.

ON FILE.—"Carp Culture," L. D.; "Economic Garden at the University," E. W. H.; "Inquiries on Cream, etc.," C.; "Children's Rights," C. I. H. N.; "This and That," Mrs. R.; "Apiary," K.; "Oardening in Tulare, etc.," J. W. A. W.; "Up the San Gabriel Canyon," A.; "Window Gardening," G. H.; "Her Rose Garden," C. H. S.

The Paris exposition is finally closed. Total receipts, 12,653,746 francs.

Artesian Wells.—No. 5.

The cost of the tools may be best determined by sending for the catalogue of some manufacturer. In a catalogue before us, the prices are as follows:

Pod augers, varying in size from 4-inch to 11-inch, vary in price from \$16 to \$38. Cast steel twist augers, sizes 2, 2½, 3, etc., up to 6-inch, cost respectively \$9, \$11, \$13, \$14, \$16, \$18, \$20, \$22 and \$24. A galvanized sand pump, 4½-inch in diameter, costs \$19; 5½-inch, \$21; 6½-inch, \$23; 7½-inch, \$27; 8½-inch, \$33; 9½-inch, \$37. The screw coupling, with straps for fastening them to wooden rods, cost \$12 a pair; without straps, \$6. Reamers cost \$10 or \$12; shoes, about \$5; wrenches, \$1.50; the block and straps for forcing the pipes, \$11; an iron ring with chains as described above would cost more. Steel rings for the lower end of the pipe, as above, cost 75 cents per foot. Windlass and cranks, with barrel, \$15. Lever for turning iron rods, \$13; to turn square poles, \$3; block and sheave, \$5. Cast-steel rock drills, of the following sizes, 2-inch, 2½, 3, 4, 5, 6, 7, 7½ and 8, cost respectively \$8, \$10, \$12, \$13, \$15, \$16, \$20, \$22, \$23. This is the price list of only one house in San Francisco.

Figs. 8 to 19 will convey some idea of the construction and mode of operation of some of the tools used. They, as well as the following descriptions, are mostly taken from Spon's "Practice of Sinking and Boring Wells." Fig. 8 is the common earth auger, three feet long, the lower two-thirds being cylindrical. The bottom is partially closed by the lips, and there is an opening a little way up one side for the admission of soft or bruised material. Augers are only used for soft rock, clay and sand; and their shape is varied to suit the nature of the strata met with, being open and cylindrical for clays having a certain degree of cohesion; conical, and sometimes closed, in quicksands. Augers are sometimes made as long as 10 feet. The shell is made from 3 to 3½ feet long, of nearly the same shape as the common auger, sometimes closed to the bottom, Figs. 10 and 12—when they are sand-pumps rather than augers—or with a nose, Fig. 9; in either case there is a clack or valve inside to retain borings of a soft nature, or prevent them from being washed out in a wet hole. The augers are frequently if not generally semi-cylindrical only. Stiff, putty-like material will mold itself into such augers and may be drawn to the surface without the aid of a valve, or of any special tool for recovering the borings.

Figs. 11 and 13 are chisels, the former flat, the latter V-shaped. These chisels are made from wrought iron, and when small are usually 18 inches long, 2½ inches extreme breadth, and weigh some 4½ pounds; the cutting edge being faced with steel. They are used in hard rocks, and while in operation need careful watching that they may be replaced when their sides are sufficiently worn to diminish their breadth. If this is not attended to, the size of the hole decreases, a new chisel of the proper size when introduced will not fit to the bottom, and time is wasted in reaming out the hole. In working, the chisel is constantly turned by means of the rod-levers above, so that it does not fall consecutively in the same position. The bore is thus kept circular. Every time a fresh chisel is lowered to the bottom it should be worked round in the hole, to test whether it is in its proper size and shape; if this is not the case, the chisel should be raised at once and worked gradually and carefully until the hole is as it should be.

In some material a chisel may be worn and blunt before cutting three-quarters of an inch; it must therefore be raised to the surface and examined frequently. In other material the wear may not be so great.

For tempering boring chisels Spon gives the following sets of directions: 1. Heat the chisel to a blood-red heat, and then hammer it until nearly cold; again, heat it to a blood red and quench as quickly as possible in 3 gallons of water in which is dissolved 2 ounces of oil of

complex "accident tools." Fig. 14 is a "crow's foot." It is used when the boring rods have broken in the bore-hole, for the purpose of extracting that portion remaining in the hole. It is of the same length, and, at the foot, of the same breadth, as the chisels. When the rods have broken, the part above the fracture is drawn out of the bore-hole and the crow's foot screwed on in place of the broken piece; when this is lowered down upon the broken rod, by careful twisting the toe is caused to grip the

pulls the palls closely against the broken rod, which thus firmly gripped may be drawn up.

Of these withdrawing tools, the crow's foot is recommended as the best, requiring less intelligent supervision than the others.

Figs. 17, 18 and 19 represent tools used for removing debris. Their operation is simple. When the tool is dropped, the borings, sand, clay, small stones, or whatever, force up the ball, flap-valves, or cone, as the case may be (see Figs.) and enter the shell of the tool. But having once entered they cannot return, their own weight helping to keep down the valves. Thus confined, the borings are drawn to the surface.

Artesian pipe is made in the following sizes:

Double black sheet iron: 6, 7, 8 and 11 inch, costing respectively, 58 cents, 62 cents, 70 cents, and \$1.22 per joint of two feet.

Galvanized, single, with collars: 6, 7, 8, 11, 12 and 13 inches; cost: \$1.38, \$1.57, \$1.60, \$2.50, \$3.15 and \$3.45 per joint of two feet.

From these price lists the cost of the outfit for a well of given diameter and depth can be approximately calculated.

A complete outfit of tools for boring wells of any of the ordinary sizes can be obtained for from \$400 to \$600. It will certainly pay farmers to club together, buy complete apparatus and use it by turns.

A Philadelphia house is introducing well-boring apparatus on this coast. It is interesting to look over their catalogue.

In the catalogue referred to, under the head of "boring rig for earth, soft rock and loose

stones," the following articles are mentioned: One auger (any size under 20 inches); six couplings, enough for 70-foot well, with improved safety pins; one set of derrick trimmings; one pair boring wrenches, 6 feet long, with 1½-inch gas-pipe handles, made light and strong, to turn the auger by hand-power; 70 feet, 1½-inch square iron shafting, with couplings fitted and attached; four wood fenders or wheels, to attach to each bar of shafting to keep the auger perpendicular and in the center of the well; one 7-inch wood drum; reamers, 30 or 48 inches. All this costs \$141. There are various extras catalogued; also a complete machine for boring to greater depths.

We are indebted for information to Ellis & Lennon, 53 Beale street, Francis Smith & Co., 130 Beale street, San Francisco, and to Charles D. Pierce, 4, 206 Elm Avenue, Philadelphia, Pa.

Description of Tools.

The tools mentioned in the last article are comparatively modern. Well-boring as it was introduced into Europe, perhaps from China, was accomplished by means of a drill attached to the end of a rope, for making the hole, and buckets or shell-pumps for removing the debris. This method is seldom used now, the ropes being superseded by rods, and the drills, where possible, by augers.

The Centennial Windmill.

Our engravings on this page give views of a graceful and powerful wind engine which is being manufactured in San Jose, by T. E. Martin at Altman machinc shop, near the narrow-gauge railway depot. Mr. Martin calls his windmill the "Centennial," and the following claims are made for it: Great power combined with great simplicity and durability; perfectly self-regulating and safe in any storm; it can be run at any speed from 20 to 60 revolutions per minute in a brisk wind, at will. On all these points it challenges comparison with any other wind engine in use, and is certainly worthy the examination of those needing to use wind power. Mr. Martin furnishes prices and other information, if addressed as above.

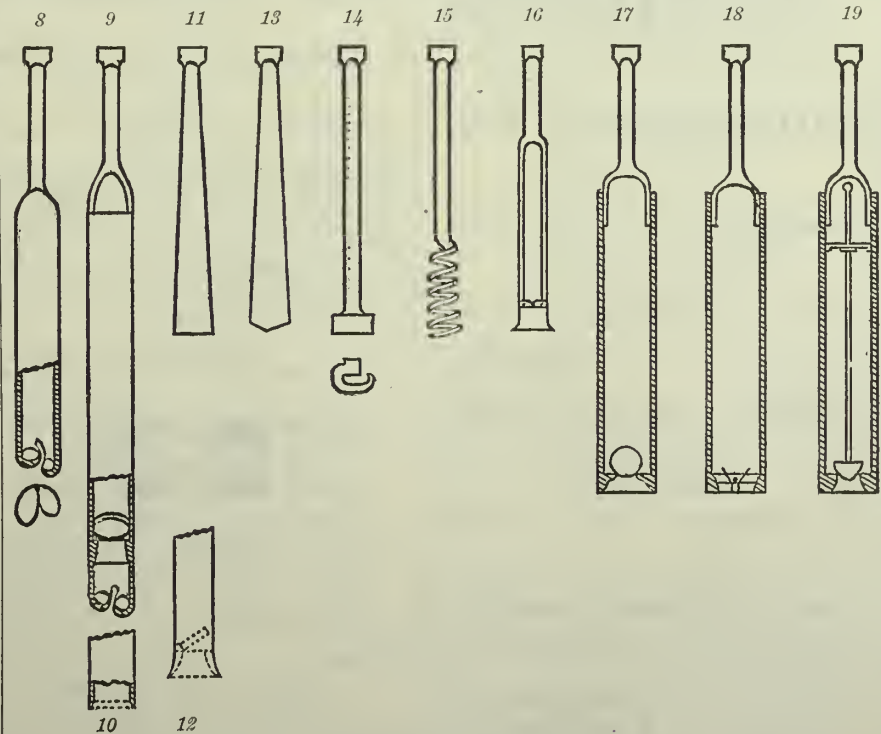


THE CENTENNIAL WIND ENGINE AT WORK AND AT REST.

vitriol, 2 ounces of soda and one-half ounce of saltpeter, or 2 ounces of sal ammoniac, 2 ounces of spirit of niter, 1 ounce of oil of vitriol, the chisel to remain in the liquor until it is cold.

2. To 3 gallons of water add 3 ounces of spirit of niter, 3 ounces of spirits of hartshorn,

broken piece with sufficient force to allow the portion below the fracture to be drawn up. A rough expedient is to fasten a metal ring to a rope and lower it over the broken rod, when the rod cuts the ring and thus gives it considerable grip. Fig. 15 is used for the same pur-



ORDINARY WELL-BORING TOOLS.

3 ounces of white vitriol, 3 ounces sal ammoniac, 3 ounces alum, 6 ounces of salt, with a double handful of hoof parings, the chisel to be heated to a dark cherry red.

Drills are used of other shapes than those in the figures. The cutting edge of some is shaped like a T; of others, like a Z; of still others, like an S.

Figs. 14, 15 and 16 present some of the least

pose. A double worm or wad-hook may also be used. The latter is also useful in withdrawing stones.

Fig. 16 is a bell-box, for drawing broken rods or tools accidentally loosened and dropped. When this tool is lowered on top of the broken rod, the end of the latter pushes up between the two valves or palls, shown in the figure. As soon as the bell-box starts to return, the weight

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Also, Six hundred acres of grazing land, well fenced, three miles from the above farm, plenty of water and timber for all purposes. Price, \$2,250.

For further particulars, address "B. T.," care of DEWEY & CO., PACIFIC RURAL PRESS office, San Francisco, Cal.

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One of the best ranges in the State. At present working 375 stands Italian Bees. Apply for particulars to D. W. McLEOD, Riverside

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FINCH'S CURE ALL—Warranted to cure all sores, old or fresh, on man or beast.

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Testimonials

Mr. S. FINCH.—Dear Sir:—I have given your Horse Medicine a fair trial, and find that it works satisfactorily, and feel fully warranted in recommending it to the public.—Geo. B. McKee, San Jose, October 10th, 1878.

I fully concur in the above testimonial, having given it a thorough test.—S. A. Bishop, Pres't S. J. & S. C. R. R. Co.

Mr. S. FINCH.—Sir:—I have used your Cure All on sores of all kinds, and can say it is the best I have ever had in my hands for man or beast. I have also used your Renovating Medicine, and can fully recommend it to the public. It should be kept in every stable, even to feed occasionally to keep horses in good condition. I keep it in my stable all the time, and would recommend it to all horsemen—especially to those keeping livery and railroad horses.—R. K. HAM, Santa Clara, Cal., October 10th, 1878.

I hereby certify that I have sold Finch's Cure All in Michigan for 10 years, and it has always given good satisfaction. And for the last three or four years have sold it in San Jose, and can truly say that it is one of the best preparations for healing all manner of sores on man or beast I have ever sold.—S. H. WAGNER, Druggist, San Jose, October 10th, 1878.

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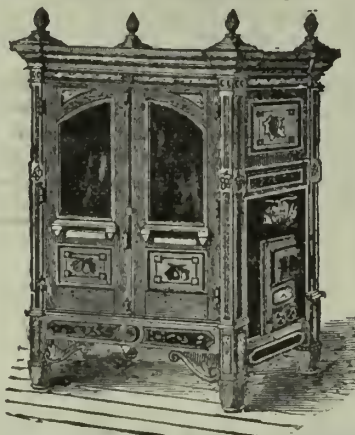
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Fruit Trees and Ornamentals,

Of the most approved varieties. Also, Coffee, Cork Oak, Olives, Guavas, English and Black Walnuts, Magnolias, Loquats, Butternuts, Small Fruits, Evergreens, etc. We have a choice stock of the Diospyros Kaki (Japanese Persimmon), of our own growing, and also, grafted stock imported direct from several Japan Nurseries. Address for catalogue and terms,

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My trees are grown in a sandy loam, without irrigation; can be no finer rooted trees grown; wood ripens early, and can be safely transplanted as soon as sufficient rain falls for lifting the stock. Early planting recommended. Catalogues with list of prices ready for distribution October 1st.

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To Fruit Growers and NURSERYMEN!

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THE SALMON BERRY.

Easily cultivated. Larger than the Blackberry, and equal to the Strawberry in flavor. Ripens from March to June, and grows in any soil. For particulars apply as above.

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Unlimited Range.

Healthy Stock.

Largest Yards

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Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Figs, Etc.

Safe arrival of Fowls and Eggs Guaranteed.

Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents. Address

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EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

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FAVORABLE LOCATION,

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Sure Crops Every Year.

The Reading Ranch,

In the Upper Sacramento Valley, originally embracing over 26,000 acres of

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Is now offered for sale at low prices and on favorable terms of payment,

In Sub-Divisions to Suit Purchasers.

The ranch was selected at an early day by Major P. B. Reading, one of the largest pioneer and owners in California. It is situated on the west side of the Sacramento River and extends some 20 miles along its bank.

The average rainfall is about 30 inches per annum, and crops have never been known to fail from drouth.

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Soft well water—remarkably sweet, pure and healthy—is obtainable at a depth of from 15 to 35 feet.

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Figs, Grapes, Peaches, Prunes, Almonds, English Walnuts, Oranges and other temperate and semi-tropical fruits can be raised with success on most of the tract. Also, Vegetables, Corn and all other cereals ordinarily grown in the State.

A considerable amount of the rich bottom land has already been cultivated.

Deep Soil With Lasting Qualities.

The soil throughout the tilled portions of the ranch proves to be of great depth and enduring in its good qualities. It is quite free from foul growths. The virgin soil among the large oak trees on the bottom land is easily broken up and cultivated.

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Land suitable for settlers in colonies can be obtained on good terms.

Are offered for sale in Reading, situated on the Sacramento River, at the present terminus of the railroad. It is the converging and distributing point for large, prosperous mining and agricultural districts in Northern California and Southern Oregon. Also, lots in the town of Anderson, situated more centrally on the ranch. Lots in both these towns are offered at a bargain, for the purpose of building up the towns and facilitating settlement of the ranch.

Purchasers are invited to come and see the lands before buying here or elsewhere. Apply on the ranch, to the proprietor,

EDWARD FRISBIE,
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A GOLD MEDAL

Has been awarded at the Paris Exhibition of 1878 to

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Best SIX CORD SPOOL COTTON. It is celebrated for being STRONG, ELASTIC, and of UNIFORM STRENGTH. It has been awarded MEDALS at the great Expositions, from the first at Paris, in 1855, to the Centennial at Philadelphia in 1876. In this country CLARK'S O. N. T. SPOOL COTTON is widely known in all sections for its Superior Excellence in Machine and Hand Sewing. Their Mills at Newark, N. J., and Paisley, Scotland, are the largest and most complete in the world. The entire process of manufacture is conducted under the most complete and careful supervision, and they claim for their American production at least an equal merit to that produced in Paisley Mills. As

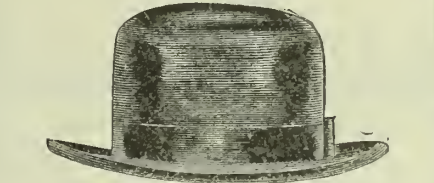
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We offer for sale a large and fine stock of pure

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"Crescent Seedling," wonderfully productive, said to have yielded 15,000 quarts to the acre. "Miners' Great Prolific," extra large, late and firm; very productive. "Cinderella" and "Continental." Figured in RURAL PRESS last season. "President Lincoln," eleven inches in circumference. "Monarch of the West," "Great American," "Prouty's Seedling," "Duchesse," "Capt. Jack," "Kerr's Prolific," "Granger," "Star of the West," "Duncan," "Cumberland Triumph," "Somer's Ruby," "Seth Boyden," "President Wilder," "Springdale," etc.

"Hershtine," the most productive, "Highland Hardy," the earliest, RASPBERRIES. "Silva's Koning Claude," the earliest and best early Blue Plum in the world. New early and late Peaches. Send for descriptive circular to

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JOHN NORCOVE,

Manufacturer, Importer and Dealer in

Trunks, Valises, and Traveling Bags,

AT PRICES TO SUIT THE TIMES.
REPAIRING NEATLY DONE.

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Ranch Wanted.

Wanted to lease, with a view to purchase as a permanent home,
A Poultry, Grain or Hog Ranch,
In some good business locality. A southern and healthy location preferred, say in Ventura, Los Angeles or San Bernardino counties. The location will depend upon opportunities offered. Address TENANT, care DEWEY & Co., San Francisco.



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WATER WHEEL

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WARRANTED BEST & CHEAPEST.

Also, MILLING MACHINERY.
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Pamphlets free. OFFICE, YORK, PA.

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CUT THIS CERTIFICATE OUT,

It will not appear in this paper again.

On receipt of this Certificate, together with seventy-five cents in Currency, Silver or Postage Stamps we agree to hand engrave any last name or initials as desired on a set (6) of our best quality Coin Plated Silver Spoon, and prepay all shipping charges to any part of the United States or Canada, provided this certificate is forwarded to us on or before Feb. 1st, 1879.

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We claim for our Silver Plated Ware that for durability and elegance of design we can not be excelled. We first heavily plate with nickel—the hardest white metal known—and then follow with a plating of pure Coin Silver, thus making the most durable plate yet discovered, and you will find by enquiry at any dealer, this quality and design of Tea Spoons will cost you about \$4.00 per set, without your name engraved thereon. On each and every article of our Table Cutlery our name is stamped and we have our design copyrighted, thus preventing irresponsible and unscrupulous dealers and advertisers from palming off an article of our manufacture at high prices. On the handle of each Spoon is a crown with the word ROYAL in the band, and on the reverse side R. M. Co. is stamped. In addition to the above offer should you wish to order Knives, Forks or Table Spoons at the same time you order Tea Spoons we will furnish any article or all of them at the following reduced prices, and prepay all shipping charges, viz., 6 Solid Steel Knives, blade and handle one solid piece, best steel covered with a heavy plating of Nickel and Silver, \$1.75; 6 Forks, 95 cents; 6 Table Spoons, \$1.20; or total for Knives, Forks, Tea and Table Spoons, \$4.65. The Table Spoons and Forks are of the same design and of the same quality as the Tea Spoons, and will be engraved without extra cost, the Knives being of steel will not be engraved.

Remember we do not stamp your name, but have experienced workmen engrave your last name in full on initials as desired. We will not furnish any of the above goods at prices named unless accompanied by the above Certificate, as we only wish to send out a limited quantity as an advertisement, well knowing in any family we place our Table Ware it will be a standing advertisement for the sale of our other goods, a catalogue of which is mailed with each shipment.

As to our reliability we quote the following from our New York papers, and refer you to any responsible house in this city.

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Lock-Stitch Sewing Machine.

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All lovers of progressive science and mechanical perfection should see it, and every lady in the land should examine and try the "DAVIS VERTICAL FEED" before deciding to purchase an inferior machine, or a single-thread plaything without a tension.

It is impossible to make a strong, elastic, or lock-stitch with any but a shuttle machine.

We are selling WHEELER & WILSON, GROVER & BAKER, SINGER and HOWE Machines for \$10 Each.

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Underfeed Machines taken in exchange as part payment. Our prices are very low for cash. Branch Office, 526 Fourteenth Street, Oakland, Cal.

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CHEAP PORK.

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Is the cheapest and best food for Hogs, being ahead of anything in existence for that purpose. 600 to 1,000 bushels to the acre. Little trouble. No harvesting. No feeding. The Hogs will help themselves it allowed to do so. I have a limited quantity of seed to sell. Send for Circular giving full information to

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\$1.50 to \$2 per day. \$6 to \$10 per week. Carriage attends all trains.

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We are now offering for sale, at \$10 EACH, the following machines:

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THESE MACHINES ARE

Guaranteed to be in Perfect Order,

And many of them NEW.

Parties in the country can have them packed and shipped free of any extra charge. Address,

WILCOX & GIBBS Sewing Machine Co.,

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Suits to order from \$20
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The leading question is where the best goods can be found at the lowest prices. The answer is at

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Samples and Rules for Self-measurement sent free to any address. Fit guaranteed.

Blackberry and Cranberry Plants.

100,000 Plants of new varieties of BLACKBERRY Plants the Early Cluster and Vina Seedling, Missouri Mammoth and Deering Seedling, the earliest and the most productive of all. I will give satisfactory proof that these berries have realized \$750 per acre. It paid more than double the amount as the old late varieties. Price by mail, \$2 per dozen, \$8 per hundred, and \$80 per thousand. Send for Catalogue. Cherry Cranberry plants for \$150 per acre, planted, not less than 10 acres in one order. We will sell to responsible parties, large orders on time, part cash.

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ISAAC COLLINS offers for sale at a bargain, for cash, 3,000 or 4,000 Cherry Trees, 1 and 2 years old. Trees good size on Mazzard stocks, and of the best market kinds. Black Tartarian, Black Republican, Royal Ann, Van Skiko, etc. Reference: E. Lewelling, Orchardist, San Lorenzo, Cal.

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The best in the World.

No machinery,
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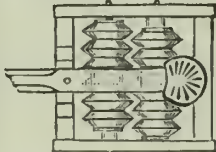
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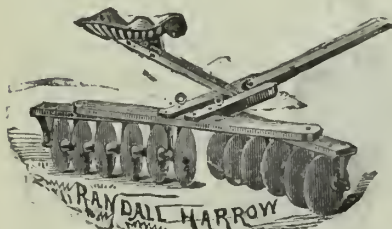
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GENERAL OFFICE AND SUPPLIES, LIVERMORE,
ALAMEDA CO., CAL. Also, Best Feed Mills for sale,
San Francisco Agency, LINFORTH, RICE
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The Randall Pulverizing Harrow.

A COMPLETE SUCCESS.



OVER 10,000 IN USE.

Local agents wanted. Descriptive circulars and Price list free on application.

Address,

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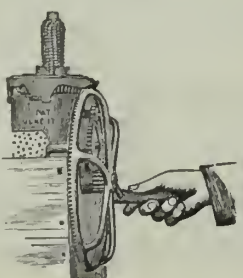
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It is so cheap (costing only \$6), that almost any one can afford to buy one. It is so rapid, it will shell almost as fast as a \$40 machine, and seven or eight bushels per hour is not above its capacity. It weighs only 13 pounds and is simple and durable. For particulars, address

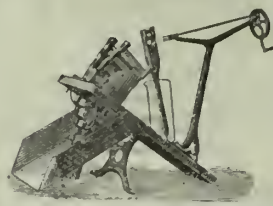
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IMPROVED APPLE PARER,
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Letters Patent No. 88,755.



This Machine is durable, easily adjusted and kept in order; does its work complete; slices the fruit of even thickness; so prepared, it dries evenly and quickly, say in 36 hours, thus avoiding a long exposure to the miller or moth producing the

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GANG PLOW.

Took the Premium over all at the great plowing Match in Stockton, in 1870.

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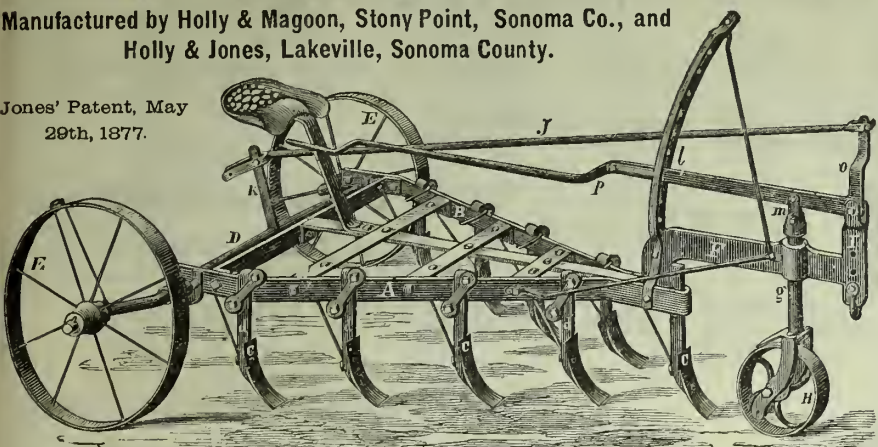
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After dipping the sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

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This Cultivator is made b
practical men, after years of
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offered.

Made of the best material
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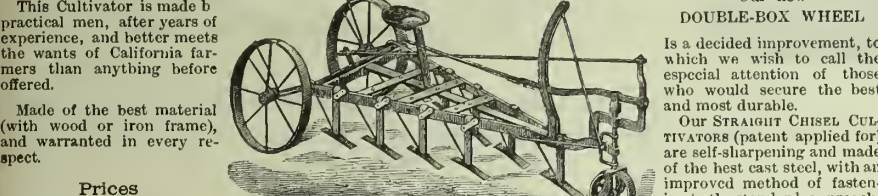
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DOUBLE-BOX WHEEL.

Is a decided improvement, to
which we wish to call the
special attention of those
who would secure the best
and most durable.

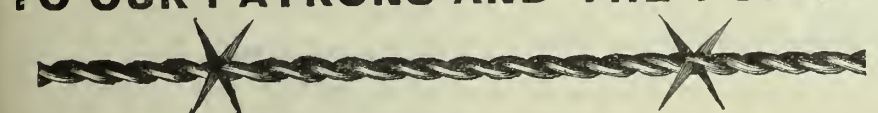
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CULTIVATORS (patent applied for)
are self-sharpening and made
of the best cast steel, with an
improved method of fasten-
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Water Without Waste and Without Attention,
EXAMINE THE RECENT
Improvements of Mr. Bachelder,
As now Manufactured by the
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TO OUR PATRONS AND THE PUBLIC.



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Scutt Patent Four-Pointed Steel Barbed Fence Wire,
And we claim its superiority for the following reasons, viz: It is plaited, thereby preserving the grain of the metal
Our machines do not twist the single strand. We use steel made by the Scaman & Martin process for barbs. Our
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There are no knife points. It is four-pointed, having 125 points to the rod, double the number of any two-pointed
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To those needing fencing, and being obliged to transport it long distances by rail and wagon road, we would
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300 pounds single strand for one mile, and less than one-half as many posts as board fences. Please address orders to
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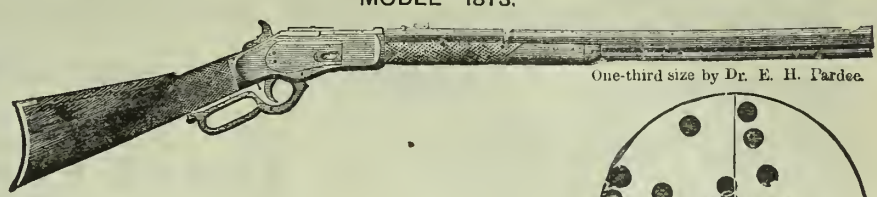
Much Obligated, Etc.

PORTLAND, OREGON, June 26th, 1877.
DEWEY & Co., Patent Solicitors, S. F.—Gents: I am
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ness, and assure you, will cheerfully recommend you to
my acquaintance needing such services. Hope to have a
case again before long, of my own. I have been an inventor
all my life, but let others reap the benefit, or had work
stolen from me. Please have the extra copies of my pa-
ent, etc., mailed to me direct, and oblige
Yours truly,
J. H. WOODRUM.


60 Chromo and Perfumed Cards (no 3 alike), name in
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Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Pardee.



The Strength of All its Parts,
The Simplicity of Its Construction,
The Rapidity of its Fire,
The Power and Accuracy of its Discharge,
The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting,
Defense, or Target Shooting.

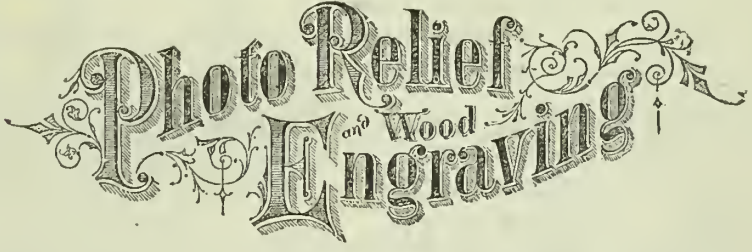
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Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24
24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24
26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—
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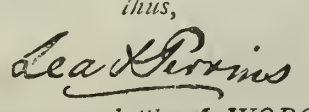
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have adopted A NEW LABEL, bearing their Signature,
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Making its own Hole in the
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Soles are Screwed on with Screws having
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It is Impossible to Rip them.

The so-called ESTABROOK & WIRES CLINCHING SCREW has only a slightly indented surface, not a cut thread, and is driven into an Awl hole, and liable to come out or work up into the foot while the shoe is being worn. This is the case with all Nailed and Pegged Shoes, more or less.

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Some Reasons Why All Should Buy Standard Fastened Surface Finished.

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Barbed Fence Wire.

All kinds of Wire—iron, steel,
Bessemer, spring, copper, brass
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PACIFIC RURAL PRESS

Volume XVI.]

SAN FRANCISCO, SATURDAY, NOVEMBER 23, 1878.

Number 21.

Condition of Soil and Evaporation.

The editor of the *Rural New Yorker* has been conducting some flower-pot experiments, to determine the speed of evaporation from different conditions of soil. He took three large pots; one he sifted full of loam and packed it down tight; another he filled nearly to the top and packed down and sifted a layer loosely on top; the third pot was filled with loosely sifted earth. These pots were then placed each in a pail of water, by itself; the water rising all around the pots to the height of their sides. He then noted the length of time which elapsed before the water was fully evaporated through the surface of the pots and found that the hard packed earth held its water longest, and the loosest packed earth was soonest dry. From these observations he thinks himself warranted in announcing that the common belief is wrong, which declares that hard packed earth dries out soonest, and that loosening the surface of the soil acts as a mulch and conserves moisture.

We do not accept such conclusions from such evidence as these experiments furnished. We could state a number of objections to testing evaporation in this artificial manner, but it would take too much space. It will be better to note a few general results which are gained here in field practice, which prove that a cultivation or loosening of the surface does conserve moisture in the soil, and therefore performs the office of a mulch in maintaining a supply of water near the surface, even in our dry summer. It has been observed practically in this State, first, that in our heavy tenacious adobe soil if the surface be kept loose by cultivation, there will be abundant moisture within reach of plant roots; if the surface be left compact, the evaporation is rapid; cracks and seams open wide, and the whole soil is dry and rocky, sometimes to a depth of three feet or more.

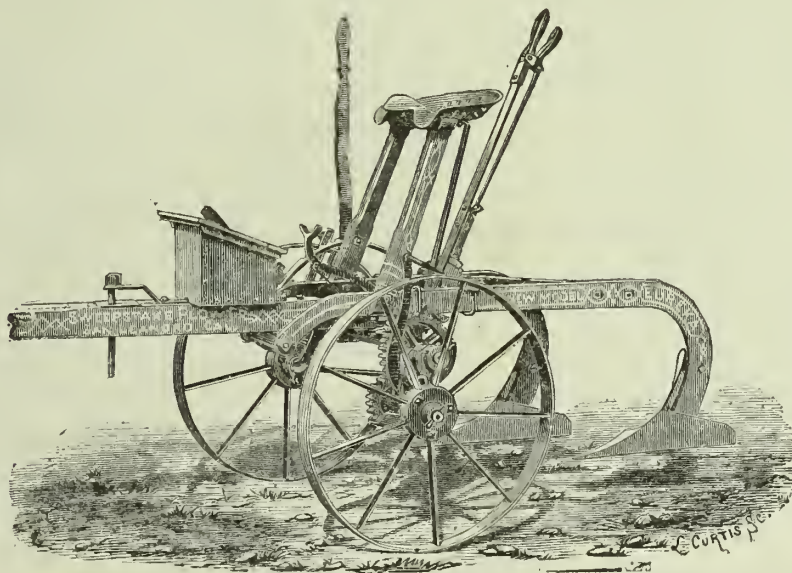
Second: We have frequently been in loamy fields where the surface has been loosened and mellowed by repeated cultivation, before beet seed was planted. Even late in the summer a scrape of the foot showed moist soil, and the beets were growing vigorously. On adjacent fields where there was natural pasturage, the soil was hard and dry for more than a foot, (for that was as deep as we dug), the "feed" was yellow and dead, and there would be no more growth until the next rains came.

In many parts of this State, cultivation is now being looked to as a surety of growth, either with irrigation only in the winter, or no irrigation at all. A case has lately been reported from the southern part of the State, where cultivation has been wholly substituted for artificial application of water and with satisfactory results. Now where does this moisture come from. It is not absorbed from the air, (although a loose surface is credited with greater absorptive power than a dense one), because, except on the coast, our air does not carry much moisture in the summer time. It does not come alone from the greater amount of water which will sink into the soil from rains upon a loose surface, because in the locality alluded to, there is no excessive rainfall. If the results gained by loosening the surface are not the percolation of all the water that falls, and the subsequent prevention of rapid evaporation, by the continued culture and maintained looseness of the soil, how are they gained? To observers in this State the claim that a packed soil dries out slowly, and a mellow one rapidly, is to say the least a peculiar one.

A New American Pear.

We give on this page an engraving of a new pear of American origin, which having been tested by the originators for several years, is now put forward on good authority as worth the attention of pear growers. The pear is being introduced by Ellwanger & Barry of

Hon. Marshall P. Wilder, President of the American Pomological Society, gives the following description of the fruit shown in our engraving: "Form generally obovate, but somewhat variable; size, above medium; skin thin, smooth and fair, clear and lemon yellow; flesh fine grained, very juicy and melting; flavor sprightly acidulous, rich and aromatic; season

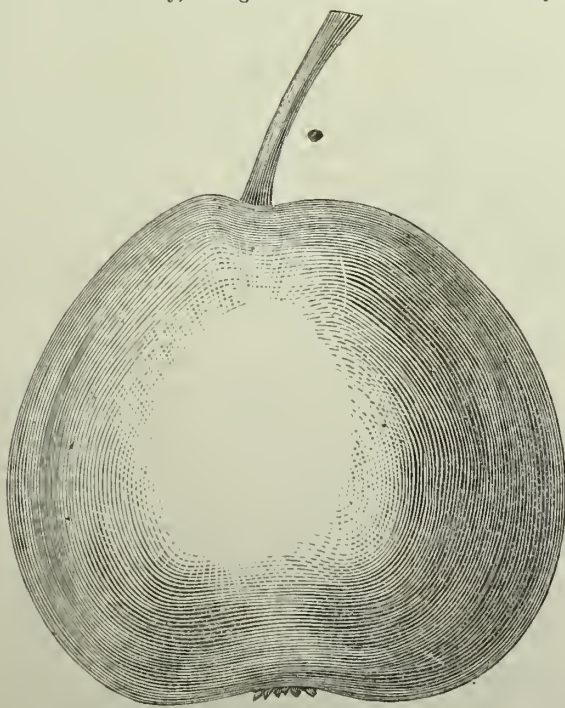


THE "NEW MODEL" EUREKA GANG PLOW.

Rochester, N. Y. It was originated by Messrs. F. & L. Clapp, of Massachusetts, who have brought out several good seedling pears. This one is named "Frederick Clapp," or "Clapp's No. 22," and is probably a cross between Beurre Superfin and Urbaniste, and the tree in its habit resembles the latter variety, being a

(at the East), October 15th to November 1st, remaining sound at the core to the last; quality very good to best, and will be highly esteemed by those who like acidulous pears."

We are not aware whether this pear has been introduced in this State or not, but from the character which trustworthy Eastern fruit ex-



A NEW AMERICAN PEAR—THE FREDERICK CLAPP.

moderately vigorous grower, and a good producer. Concerning the fruit of the Frederick Clapp the committee of the Massachusetts Horticultural Society, judging at a late fair, said: "It was pronounced decidedly superior to Beurre Superfin, and is regarded by all who have seen it as the highest bred and most refined of all the seedlings shown by Messrs. Clapp."

perts give the fruit, it seems worthy of attention.

The municipal authorities of Liverpool have taken active steps toward the introduction of the electric light for public thoroughfares and buildings and private houses, and have in consequence postponed a proposal for the purchase of the stock and property of the gas company.

Important Improvement in Gang Plows.

We illustrate on this page an improvement in gang plows, which appears to be of more than ordinary merit and importance. It is a device whereby the forward motion of the team is made to lift the plows out of the ground with great power. This has been frequently attempted before, but not with entire success, we believe. It has heretofore been found that the adhesion of one of the wheels to the ground was not sufficient to raise the plows except with the assistance of the driver, who was obliged to push hard on the lever with his hand. This is because with plans tried previously the wheel did not and could not have sufficient leverage. An inspection of the cut will show the operation of the invention clearly.

The carrying wheels are attached to a double crank axle, as in the old style Sweepstake gang. On the main axle is placed the larger cog-wheel, seen in the engraving. It is about 10 inches in diameter and turns loosely on the axle except when held from turning by a brake that is applied by a foot-lever, seen near the tool box. Gearing into the cog-wheel referred to is a small pinion about five inches in diameter. This is rigidly connected with the near carrying wheel by a short shaft journaled in the lower end of one of the cranks. The plows in the cut are shown raised to the highest point possible, and the pinion consequently is on the lower edge of the large cog-wheel.

The operation is as follows: The locking lever being released, the plows drop down to whatever depth may be desired. In doing so, the pinion travels upward around the cog-wheel, being then (if the plows are very deep in the ground) nearly on top of the cog-wheel. To raise the plows, slight pressure is applied to the foot-lever, which brings the brake in contact with the large cog-wheel, holding it still. As the pinion must continue to revolve, it is compelled to travel down and around the large cog-wheel, thus raising the plows. The plows raise twice the ordinary height from the ground and can be lowered beam deep.

We are assured that this plow raises with such power that it will carry up the weight of three or four men with it, and it is claimed that it can be operated wholly by the pressure of the brake, the use of the hands not being required either to raise or lower it. This self-lifting device is the invention of Mr. Jacob Price, the inventor of the Petaluma and Eclipse hay presses and the Price excavator—and will be applied to Hill's celebrated Eureka gang, the implement with this attachment being called the "New Model Eureka." They are manufactured by the Sweepstake Plow Company at San Leandro, and sold by Baker & Hamilton, at whose stores in San Francisco and Sacramento they may be seen.

THE PEANUT CROP.—Our peanut growers will be interested to know that the outlook for future prices is pronounced good by Eastern experts. They say that the crop year will close with the smallest stock held for years. Thus prime new nuts should command a good price. They quote the Tennessee crop for the year ending September 30th, 1878, 305,000 bushels; and they estimate the crop of 1879 as follows: Tennessee, 400,000; Virginia, 800,000; North Carolina, 90,000. California does not figure in the supplying States. What have our growers to say of their experience with the crop, as to its profit and otherwise?



CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Gardening, Honey-Dew, Egyptian Corn, and Goose Wheat.

EDITORS PRESS:—A garden spot, just north of Grangeville, is worthy of notice in your columns. It consists of seven acres rented by Mr. R. M. C. Hill, and is planted with sweet potatoes, pumpkins, watermelons, cabbages, lima beans and tomatoes. The amount of these products obtained from this small tract is curious to see. A small ditch around it supplies the water from Last Chance ditch. Along this is a handsome row of Australian gums, forming a border around the tract. These seven acres are irrigated entirely by seepage; that is, they are made sufficiently moist by keeping the small ditches full of water.

From sweet potato slips set out in May, I saw potatoes, weighing from one to two pounds, dug August 1st. Those at all familiar with gardening know how cabbage stalks usually sprout after the heads have been removed. Here Mr. Hill pointed out to me a peculiarity of these sprouts, which I have not seen elsewhere, though others may. Often a half dozen or more heads are formed on such stalks. On a last year's stalk I counted seven good-sized, solid heads on long, trailing branches, which grew from the old stem—good proof of a mild climate and a strong soil. After the spring and summer crops are gathered from the above and similar tracts, a winter crop of onions, turnips and cabbages is grown.

Honey-Dew,

As produced in its two natural forms, has attracted more or less attention in many parts of California. The question is often asked: "What makes this honey-dew?" The correct answer to this, as many of your readers no doubt know, is, according to best authorities, that it has two sources: 1st, One form is deposited from a natural secretion of different kinds of plant-lice, or aphides, that exist at times in countless numbers; 2d, another form oozes from the leaves and stems of certain plants in hot, dry weather, and dries in drops. In both cases, it is the sap of plants dried to the consistency and color of dark honey, and having much of its sweetness, the only difference being that in the first form named the sap is drawn from the leaf or stem by the long, hollow beak of a plant-louse, or aphid, passes through its body as food, and is then ejected in little showers, at regular intervals from the small tubes near the end of its short body. When millions of these tiny insects, whose whole length is usually about one-sixteenth of an inch, though the largest species has a body one-quarter of an inch long, give their bodies an upward jerk and eject this fluid in unison, as is their habit, it is surprising to see how much of the honey-dew will be formed on surrounding plants and ground within a few days. It darkens the soil in spots, just as if any syrup had been dropped upon it, and on leaves and stems of plants considerable quantities collect in large flat drops.

Often as I have read accounts of this process, never till recently did I have an opportunity to witness this formation of honey-dew by plant-lice.

Along King's River,

on the place of Daniel Spangler, I examined with him myriads of these insects at their work on his watermelon vines. Immense numbers of them hung to the leaves with their gluttonous beaks, gorging themselves with watermelon sap, and spurting their honey around at a lively rate. It was an interesting sight for any student of nature, and would have convinced any one previously skeptical, about the large amount of honey-dew these small insects can distill. It would readily refute the odd and groundless theory of some, that honey-dew is distilled from the air. Mr. Spangler informs me that his pumpkin vines are now full of them. He also tells me that the willows and oaks along the river, but especially the former, are the resort during the fall months of countless millions of these insects, [*Aphis salicicola*, Uhler?] and their leaves and the ground beneath are covered with large quantities of honey-dew. Bees at this season get much of their honey from this source, and from Mr. Tom Thornton, who also lives near King's river, I learn that in the driest seasons the supply is most abundant, and for months it forms their chief source for honey, there being few or no flowers then. Indeed he thinks the bees would be likely to perish without this supply in such seasons. Ants in large number also resort to these trees for the honey-dew. Their habits with these honey-bearing aphides here, confirm what numerous trustworthy writers on the curious features of natural history tell us about the attention and care which ants elsewhere show toward these little insects, as though they were their milk-cattle. To Mr. Thornton I am also indebted for the fact that

Indians Gather Honey-Dew,

for their own use, in a way that they call "making honey." They steep in cold water

the willow leaves that are covered with honey-dew and wash it off carefully. When the water is well impregnated with the latter, they boil it down to a syrup, which they use with other food, and to sweeten their coffee. Here then are two uses, in the economy of nature, which these tiny plant-lice serve—pests as they are esteemed on our vines and vegetables. No surer remedy, by the way, can be found, against these different kinds of plant-lice, when they infest our gardens, than the small yellow or red and spotted beetles, known as lady-bugs, (*coccinella*.) The latter have often been deemed enemies of our gardens, when, in fact, they prove themselves to be good friends by keeping down the aphides, on which they feed. Your correspondent ventured to taste some of the honey-dew on the watermelon vine, above mentioned, found its sweetness neither rich nor toothsome, and cannot recommend it in its crude form for human use, farther than to make Indian "long-sweetening."

In regard to their numbers, we cannot wonder at the myriads that appear together, when we remember that "Reanmur has proved that one individual in five generations (one season) may become the progenitor of nearly 6,000,000,000 of descendants." Tenney, one of our best authorities, also states that 14 generations of them are sometimes produced in a single season!

Egyptian Corn and Goose Wheat

are among the new grains grown with decided success on these irrigated lands. Their yield here is large, though I cannot state it accurately in bushels per acre. Bread and "gems" made from white Egyptian corn are very much like those from Indian meal, though darker in color, coarser grained, and less oily and sweet. Yet it is a palatable and wholesome article for food.

Mr. E. Sanborn, near Grangeville, has grown a large amount of the new goose wheat, already described in the RURAL. Its "berry" closely resembles a large rye. His good wife having kindly given me the recipe for some delicious "gems" made of it, and such as I enjoyed at their hospitable table, I beg leave to close this letter with it as a guide for others who may try goose wheat flour.

Have the flour ground without bolting. To make a dozen and a half gems, take one coffee-cupful of butter-milk, one egg, and a lump of lard the size of a walnut. To the butter-milk add one teaspoonful of soda, a little salt, and enough of the flour to thicken to a stiff batter. Bake from 10 to 12 minutes in a well heated oven. If baked one or two minutes too long, it will make them too dry. Try these goose wheat gems according to Mrs. Sanborn's recipe, and you will find that you can devour them with a "coming appetite." J. W. A. W.

Tulare county, October, 1878.

Feeding Cheat to Animals.

EDITORS PRESS:—In reply to your enquiries in regard to the poisonous nature of cheat, I will say that is a common custom here, at Stockton, to separate from wheat the cheat, oats and small defective grains of wheat, and feed this mixture to the chickens, or after being ground, to horses, as a substitute for barley. Having practiced this method for ten years, and fed tons of grain of which cheat formed half the weight, and having observed or heard of no bad results, I think I have the right to say the expression, "poison daniel," has no just application to common California cheat.

In the Spring of 1853 I bought from Mr. Jos. Basset and the late Maj. Chas. McDermit, some seed wheat, which I sowed in Siskiyou county, April 12th, of that year. There was apparently but little cheat in it, so I sowed it as it was. A flood came up in July which fully developed the cheat without destroying the wheat.

When in blossom I pulled up all that cheat, feeling well rewarded if in a half-hour's hunt I could find a stalk. The next year the wheat grown from that seed was free from cheat, and for several years that seed wheat was sought for on that account. I then observed that California cheat was a different variety from the Eastern article. Within a few years another variety has made its appearance on my farm here, growing along the sloughs where the land was never plowed, and superseding wire and other perennial grasses. The theory that wheat seed produces only wheat and cheat produces only cheat accords with all phenomena and facts that have come to my knowledge in 40 years of wheat growing. Our soil is full of dormant cheat, fennel and other seeds that are waiting their opportunity of germination and development. I do not question that in the evolution ages that cheat may have changed to wheat or wheat to cheat, or that all vegetation may have sprung from a few simple forms, but that such evolutions can be made in a year I will admit only when facts admit of no other conclusion.

D. A. LEARNED.

Stockton, Oct. 12th.

We did not intend to admit anything more on the "wheat and cheat question" as such, but our correspondent gives us a good item on the feeding of cheat, which prepares the way for what he adds on the general subject. Let us give the old controversy a rest, but bring forward all facts concerning the use of the grain known as cheat.—Eds. PRESS.

Irrigation Lessons of the Los Angeles Fair—No. 2.

EDITORS PRESS:—The exhibits of the production of the soil at the late fair of the Horticultural Society, held at Los Angeles, brought out more clearly than ever before the fact that a very large proportion of the arable land in southern California will produce, without irrigation, not only barley, but corn, potatoes, pumpkins, fruit, and every other plant cultivated here. With respect to irrigation, southern California naturally classifies itself into lands that produce all manner of plants without irrigation; lands irrigable by rivers; lands irrigable by brooks that perennially flow out of canyons at short intervals along the foothills of hundreds of lineal miles of mountain ranges; lands irrigable by artesian wells; lands irrigable by surface wells, and lands with no means of irrigation, and that produce only wild grasses, wheat, barley, flax, and such plants as grow in winter and early spring, with no other moisture than that coming directly from the clouds.

In the moist regions are situated Compton, Downey City, Norwalk, Artesia, Anaheim, Westminster, Santa Ana, Tustin City, Gospel Swamp, the vicinity of Orangehorpe, El Monte, Riverside and San Bernardino, a belt along the Santa Barbara coast, Lompoc valley, many valleys in Ventura and San Diego counties, and extensive areas in Kern county. In all these regions are extensive areas that produce all manner of plants the year round, without irrigation. From these regions one expects to meet exhibits of soil products grown without irrigation. But among the foothills, on high lands aligning the moist regions, irrigation is the rule, however luxuriantly grow alfalfa, clover, mustard, wheat, barley, flax and other plants that spring up at the summons of the spring-like showers that fall in winter, and that mature before summer. It is meant that irrigation is the rule where summer and fall crops are produced outside of the moist regions, and that production without irrigation is the exception. Now the exhibits at the horticultural fair proved that the exception to the rule of irrigation in the dry regions have been greatly enlarged by intelligent husbandry, and that the large areas in the moist regions, producing large summer crops without irrigation, are expanding from year to year. Take for example Pasadena, situated near the mountains, a few miles northerly of Los Angeles City. Pasadena is high; it over-looks even the high lands around the city of Los Angeles. The exhibits of magnificent corn, garden truck and fruit grown in Pasadena without irrigation were surprising, gratifying and instructive.

A Note on Peaches.

The size, beauty, delicacy and variety of peaches exhibited by Dr. Conger, of Pasadena, forever dismisses every doubt as to the adaptation of that fruit to southern California. Dr. Conger thinks by having the varieties of peaches that ripen earliest and latest, as well as the intermediates, that ripe peaches may be gathered from the orchard during nearly half the year. Dr. Conger has developed a number of varieties of seedling peaches of decided merit. One of them seems to have the savor of the apricot.

San Gabriel and other foothill regions testified by exhibits that there are lands in the foothill belt that produce crops in summer and autumn without irrigation. The sum total of all the areas in the foothill belt that produce all the year without irrigation if accurately estimated would, upon announcement, agreeably surprise even the older south Californians.

Florence, partly within and partly on the border of the moist belt, illustrated at the fair, both the successful culture of the moist belt without irrigation, and the encroachment of successful culture without irrigation upon the higher and drier land aligning the moist belt. Of the extensive and diversified display of soil products made by Florence, nine-tenths were grown without irrigation. Among the Florence products grown without irrigation were carrots, Hubbard squashes and pop-corn, by G. A. Blakelee; watermelons, potatoes and cucumbers, by S. A. Waldron; field peas and corn, by J. F. Nadeau; apples, by B. F. Moore; garden peas and sugar beets, by M. Serrott.

Another fine illustration of production without irrigation was the exhibit by O. N. Cadwell, of apples, pears, English walnuts and kidney beans, raised by him in Carpinteria, Santa Barbara county. All of the mentioned articles from Carpinteria and Florence, and the fruit from Pasadena, were awarded premiums or diplomas, upon a comparison at large; that is, without reference to whether grown with or without irrigation.

The pumpkin weighing 218 pounds, 90 days old from the seed, was also a product of Florence, for which the premium was awarded to Judge R. Raney, the gentleman who raised it. But this premium pumpkin, though not directly irrigated, is supposed to have been to some extent affected by an artesian stream that flowed not far away.

There were numerous other articles on exhibition that were raised without irrigation, in Florence precinct, which, though not eliciting premiums, were illustrative of the capacities to produce without the artificial application of water. Among these articles were pumpkins

weighing from 100 to 160 pounds; a sugar beet weighing 80 pounds; a mangel wurtzel beet weighing 125 pounds; enormous sweet potatoes and various other articles that would have commanded premiums at a fair anywhere outside of California. There were no doubt exhibits of soil products from numerous other places, drawing premiums or high praise, and open to no allegation of artificially applied water to lessen the credit of dimension or weight.

Carpinteria.

It is perhaps not generally known that Carpinteria, in Santa Barbara county, is one of the most productive and valuable sections in the State, produces almost everything possible in our climate in profusion without irrigation. The writer once saw on Mr. Baylard's farm in the Carpinteria, 50 acres of corn averaging 90 bushels to the acre, that was never plowed, hoed, weeded or in any way cultivated after planting. The land was not irrigable and of course was not irrigated. The 50-acre crop of 4,500 bushels of corn was the product of the labor of one man.

Mr. O. N. Cadwell, of Carpinteria, had on exhibition an extensive assortment of fruit. Mr. Cadwell is making a specialty of seedling apples and peaches. He already has some 30 varieties of seedling apples and a number of varieties of seedling peaches. He finds his seedling peaches less liable to curled-leaf than the old California peach trees. Mr. Cadwell is sufficiently encouraged by the results of his experiments in the way of developing seedling apples and peaches to prompt him to future perseverance in the same lines.

General Deductions.

The fact disclosed at the fair leaves it pretty well settled that nearly all of the arable land in southern California is susceptible of being reduced to use for summer and fall crops, and that there is water enough, if economized, to irrigate all the land not naturally moist enough. It is true that much of the land could not be profitably irrigated now or even within the present generation; but commencing with that which can be least expensively subjected to the production of crops without regard to the season of the year, the remainder will gradually appreciate to the point of profitable irrigation.

Another great fact illustrated by the exhibits at the fair was this: The soil-tiller of most of southern California can find something to do every day in the year. It need not be a rush for a few weeks to pitch a crop and then nothing to do until harvest, then another overwhelming concentration of work for a few weeks to gather the crop, and then again nothing to do until time to pitch another crop. The year need not go by with eight months of nothing to do and four months of too much to do. It was also clearly demonstrated that the farmer of southern California can raise all the products usually sold abroad and all that are necessary for home use. The garden, the orchard, the field, the dairy, the poultry-yard, and every other domestic department, may all be on the same quarter-section. In short, a farmer's home may here be as complete and symmetrical as anywhere in the world, and may contain a variety in the symmetrical make-up hardly to be equaled outside of California. If it be true, as has been said, that the farmer of old blue grass Kentucky, lives at home and boards at the same house, it is equally true that the farmer of southern California can construe a domestic establishment sufficiently complete to merit the same allegation of its occupiers. And like a home in blue grass Kentucky, it requires much money in the acquiring and more sagacity to make it a financial success. But with sufficient capital and the adequate excess of sagacity the financial possibilities of soil tillage in California are vastly in excess of those of Kentucky.

JOHN H. SHIELDS.

Florence, Los Angeles county, Cal.

A Garden of Economic Plants at the University.—Seeds Wanted.

EDITORS PRESS:—Among the appliances most needed at the University for instruction in the agricultural course, is a garden of economic plants embracing a full representation of all species of plants, and their prominent varieties, which are, or may hereafter, be successfully grown in our climate for economic uses. This includes of course, not only fields and garden crops, but also medicinal plants, as well as forest trees, both native and foreign. The student should be enabled to form, on the University domain, the personal acquaintance of every plant with which he may hereafter have to deal in practice; and the culture of such plants should be experimentally studied here, to gain suggestions as to their adaptation, peculiarities, merits and demerits.

The ground designated for this purposes is now in readiness, and seeds and plants are being received from various quarters, both in America and in the Old World. It will of course require several years' time to secure all the material desired; but farmers and other persons interested in agricultural progress, and especially in industrial education, can greatly aid and accelerate the accomplishment of the objects in view, by sending the seeds of economically interesting plants. There are in cultivation in this State, many rare kinds of cereals and other crops, brought into the country by the hands of its cosmopolitan population, or imported expressly for trial, the seeds of which cannot be obtained from seedsmen either in this State or in the East. Contributions of such will be especially welcome, and will be paid for when desired; and

in any case the postage on such packages which can now be sent by mail when not exceeding the weight of four pounds, at the rate of one cent for every two ounces, will in all cases be cheerfully refunded.

While economically useful plants are primarily desired, all kinds of seeds of both native and foreign plants, curious, ornamental or otherwise interesting, will be welcome, as materials for the garden or general botany hereafter to be established. A full representation of the trees and shrubs of California itself is especially desired; among them, ripe acorns of the several kinds of oak, cones or nuts of pines, etc. All information regarding the names, uses, habits, etc., of the several plants in possession of the senders, is desired; and all contributions of any kind will be thankfully acknowledged, both directly, and in the reports of the agricultural department.

Of cereals and similar, as well as the larger seeds, from a pint to a quart is the desirable quantity, but any other amount will be welcome. Address "University of California, care of Prof. Hilgard, Berkeley, Cal."

E. W. HILGARD.

University of Cal., Nov. 11th, 1878.

We hope our readers will take a good hold of this enterprise, and push it forward. Here is a chance to have hundreds of plants tested at State expense, and the results published for the benefit of all. We hope all will aid the project as Prof. Hilgard requests.—EDITORS PRESS.

THE APIARY.

The Beekeepers Picnic.

EDITORS PRESS:—The beekeepers picnic was a decided success. They came from far and near, bringing the good things of the larder. After a repast the beekeepers collected in groups, and seated themselves on the carpet of grass under the shade of large cottonwoods and willows, beside a clear running stream. The young folks put up three or four swings and seemed to enjoy themselves hugely, until night, when they appropriated the schoolhouse for a hall and tripped the light fantastic toe until a late hour.

The second day being named for a regular beekeepers' meeting, they began to assemble at the apiary of Atwood & Keuny at an early hour, and kept coming until dark. Some came a distance of 50 miles, those being too late to get the benefit of the talk on foul brood, the question of the most importance at the present time, as the dread disease is fast creeping upon us, and has already broken up some of our best apiarists in the lower country. Our mountains are full of the disease and one ought to be careful about taking wild swarms into his apiary. There comes in here the question of crowding near together, for foul brood is dead brood and at a certain stage there is a glutinous matter sticking to the bees as they try to clear it out of the combs, and it is carried by them to the flowers perhaps three miles. The bees from the next apiary, alighting on the same flowers, may carry it three miles farther; and so it goes from one to the other, until we all get it, and away goes the bee interests of our Golden State; the country that produces the most and best honey in the world.

It was thought for the best interests of the beekeepers, that the meeting should appoint Prof. Tutchman to examine all the apiaries in the county to see to what extent the disease has got into the county, and to destroy the same in every instance; the expenses being paid by members of the association, both to the Professor, and the man that loses the bees. This is an important step, and we hope has been taken in time to prevent us suffering the loss of our southern neighbors. We shall say more of this as developments occur.

Other business of the meeting was to appoint Messrs. J. G. Corey, John Hunel and R. W. Kenny to prepare essays on, how to locate an apiary, as for conveniences, machinery, etc.

Other questions of importance were discussed; such as markets for our products in foreign countries, and the shape to put it in to make the same salable.

A gentleman recently from Australia, told us all about the bee interests in that country, which was very interesting. It seems that the bee interests there, or in portions of that far away country, has dwindled down to nothing, because of foul brood and the moth imported there. Altogether the meeting was a decided success.

Notes for the Season.

Now close up the entrance to a small space, say two inches. It keeps the bees warm and prevents a large consumption of honey; for honey is heat to the bee the same as fire is to us. It also helps to protect them from robbers, which are very numerous now. It is not policy to disturb the hives more than is necessary now, for it excites them to robbing, and more or less get killed if you have to open a hive now. Wait until night or after the bees get done flying, and then be careful and not have any honey scattered around to excite them in the morning in their early flight.

R. W. KENNY.
Springville, Ventura county.

THE STOCK YARD.

Feeding Stock for Profit.

The following paper was prepared by Edward Berwick, of Monterey, and read before the late meeting of the California Dairymen's Society:

I must preface what I have to say by mentioning that my basis of experience has been acquired in Monterey county. If in other counties better uses obtain, so much the better for those counties. Perhaps my paper should have been entitled "A Protest Against the Starvation of Stock."

There are certain fundamental axioms in the live stock business which are disregarded by 19 out of every 20 farmers; although in every instance an absolute loss follows the disregard. Doubtless all the 20 are fairly familiar with these axioms, and are conscious that the loss, consequent on the disregard, is merited. Californian custom is, however, second nature to them, and, in spite of resolve and re-resolve to amend, Californian custom still enthalls them.

The axioms, or first principles, to which I refer, are such as these:

That it is the surplus food an animal eats, over and above its absolute bodily needs, which gives the feeder's profit.

That it is much better to have an over-abundance of "feed" for your stock than over-abundance of stock for your "feed."

It is obvious to the meanest capacity that feeding an animal merely sufficient to maintain it in a state of *status quo*, must result in absolute loss. The notion that the small eater of the dairy herd is the economical cow to keep, is "quite an exploded idea."

The cow with the well-rounded, capacious barrel, which she is industrious in keeping well-filled, and who freely yields the superabundant carbon and nitrogen to the milker, is the cow esteemed for the dairy. The neat, smooth-made steer, disposing of his superfluous nutriment by interlarding his bundles of muscle with layers of fat, is justly the grazier's pride. But, no matter how well-bred a cow or steer may be, unless the superabundant nutriment be provided, there can be little profit, either to grazier or dairyman. The too common plan of milking a cow, with just a small margin of profit, during the season of flush grass; "stripping" her, as the grass dries, until very little flesh remains on her bones, and then turning her out to "pick her living" on the scrubbiest of pastures, is hardly commendable 19th century practice. Beef stock, during the very few months that grass is green and abundant, put on flesh; too frequently only to part with it again as pasture becomes scant and innutritious. Should the rainy season be late and inclement, many die.

Hogs enjoy two periods of semi-starvation yearly. Rapid growth is made on green grass until, perhaps, the end of April, when the first down-hill period intervenes until such time as barley is ready. By November most barley fields are cleaned out and the second starvation period endures until grass is fit sustenance, usually about mid-February.

Graziers appear loth to realize that their over-numerous herds are a positive detriment to themselves. In their haste to become rich, their "vaulting ambition overleaps itself, and falls on t'other side." A few more seasons such as '77 will convince men that a reserve of provender is a paying institution.

If any entertain doubt as to the relative profit of semi-starving or well-feeding stock, let me give an instance. A neighbor of mine last fall was milking 86 cows, picking their living on a barley stubble (the field had been cut for hay); they yielded 16 pounds of butter daily. Finding that his cows were barely paying the expenses, he determined to select 22 of the best, and to "turn out" the remainder. The 22 were then pastured in a field of alfalfa and produced 23 pounds of butter daily. Thus about one-fourth of the number of cows, well fed, produced nearly half as much again as the entire herd.

The history of that unhappy creature, the "dairy-raised" calf, exhibits another weak point in stock management. It cannot be too widely understood that an animal, which receives an insufficient amount of nutritious food in the early stages of its career, has its normal capacity for assimilating nutriment decreased, and can probably never again attain that full capacity. I am far from recommending injudicious cramming of calves. Even semi-starvation seems less injurious to a newly-dropped calf than an excess of milk from the pail. Sucking from the teat, instinct instructs it when to leave off; but drinking from the pail it appears unable to measure its proper modicum.

It is by no means easy, however, to induce any animal over three months old to eat more than it can satisfactorily dispose of, provided it is always well fed, not one day starved and next day glutted. I cannot too strongly insist that it is the constant thorough feeding, from birth to maturity, that is the profitable feeding. By such treatment a steer can be made to reach 1,600 pounds gross at from 24 to 30 months old; while, under the winter starvation management (?), it is doubtful if that weight will be arrived at in double that period. The cash account may stand something thus: The well-fed steer can be sold anywhere, and that will be, of course, when beef is scarce. He will net 900 pounds, say at nine cents, and \$81 will be his value. The five-year old animal will do well if

he nets 800 pounds, off grass, and sells at five cents for \$40. Presuming that both have eaten an equal amount of provender, and that the well-fed steer has cost \$20 more for labor in feeding, etc., there is still a large margin in favor of the quick growth.

It is impossible to estimate exactly the difference in the two methods implied. Conditions are so varied and markets so variable that no absolute rules can be laid down. A more general practice of diversified husbandry would facilitate a more intelligent method of stock-farming. For winter feeding of cattle in this climate I cannot too highly commend the squash. Many deery its use, especially if fed with the seeds, as detrimental to dairy cows, as diminishing the yield of milk. I think the trouble has been that the quantity of squash given per cow was too small, and the cow, with the taste of squash in her mouth, declined to fill up with dry, dusty, trehly-trampled grass. I find that a steer, amply supplied with squash, will hardly touch even good hay; although on very cold mornings I make a practice of feeding hay the first thing, and a few pounds are then relished. One hundred and sixty pounds of squash per diem is about the allowance for a fattening steer, or a milch cow; perhaps two pounds of hay may be eaten in addition. I have made 53 pounds of butter in a week from four cows thus fed, having access also to young grass; so that I am amply assured that squash seeds do not dry up cows. The seed is the first thing eaten by both cows and steers; to chickens, however, squash seeds are often fatal, causing them to roll about as though inebriated. Butter from squash is of fine flavor, color and texture; but beef squash-fed is rather over-yellow for the fashion of San Francisco market.

Italian rye grass is another kind of fodder to which I would draw attention. On irrigable lands, especially those over-moist for alfalfa, it will be found more productive, more palatable, and of more rapid growth than that popular trefoil.

Those who cannot raise green crops can at least raise hay sufficient to prevent that annual putting off of the flesh gained in summer at the very time when it is most required by the severity of winter. But let your provision of hay be ample. Do not have to deal it out to your stock as biscuit is dealt out to a shipwrecked crew in an open boat at sea and far from port. Be glad to see them putting it away as fast as you can feed it to them; don't be looking with a jealous eye on your scanty supply which each day threatens to give out. If you cannot get enough feed sell your stock. What you cannot properly feed it is neither right nor wise to keep.

I am aware that I have advanced no new theories in the half-hour you have kindly allotted me. Let me, in extenuation, address to you the words—the familiar words—of our Divine Teacher: "If ye know these things, happy are ye if ye do them."

HORTICULTURE.

Hardiness of the Diospyros Kaki.

EDITORS PRESS:—The persimmon, called "she" in China, and "kaki" in Japan, is one of the most common and highly prized fruits cultivated in those countries. The tree is grown chiefly for its fruit, from Canton to Peking, in China, and all over Japan; but the wood is also applied to various purposes. Many varieties are seen in the markets of Canton, one of which, called by the Chinese, "ngau-sam-tss," or ox-heart persimmon, has a deep red color, the sweet pulp surrounding the seeds. This and two or three other sorts, common in that region, have been produced by culture, and show that the persimmon is capable of great development.

The Cantonese press and dry the common kind for exportation and ship stores, whence it has got the name of "China fig," from its resemblance in shape and taste. In northern China the persimmon forms an important article of food for the poor, and its abundance in good seasons puts it within reach of everybody. The diffusion of so acceptable a fruit will be a great boon to this country.

The above quotation is written by S. Wells Williams, LL. D., late Secretary of Legation, at Peking, China, and shows that the Japanese persimmon flourishes in the same varieties of climate as the wild persimmon of our country. The difference between Canton and Peking comprises about the same degree of latitude and variations of temperature as are found between Florida and New York.

This is also corroborated by the statement of Rev. John Ing, of Salt Springs, Mo., who has spent several years in Japan. In my residence of over three years in Japan, I saw much of this excellent fruit, and am therefore prepared to add my testimony to the great worth and superiority of the same. I have eaten the persimmon both fresh and dried, and know of nothing equal to it. I very much prefer it to the best Smyrna figs that I have ever met with. I have seen in Japan, latitude 40°, where the snow falls to the depth of four to five feet every winter, and remains on the ground from the 20th of December to the middle of April, persimmons grow ten inches in circumference. The fruit, both fresh and dried, is in universal request among the Japanese, and will be with us when once its virtues are known.

San Francisco.

HENRY LOOMIS.

PISCICULTURE.

Carp Farming.—No. 1.

EDITORS PRESS:—By your request I propose giving the public a few chapters on carp culture, as it appears to be demanded by the public. I think it is an established fact that carp farming is going to be a business that will be entered into largely, and the people should go at it understandingly. Therefore I offer my information. In my articles it is intended to give a brief description of the carp of Europe, its nature, way of living, its ratio of natural and artificial increase in open waters, rivers and lakes; the most approved methods of its culture and the proper construction of ponds and breeding establishments. My object in view is to still draw attention to this valuable fish, that is specially adapted to our needs.

Description of the Carp.

The carp (*Cyprinus carpio*, of the family *Cyprinidae*), has a toothless mouth, thick lips, and four barbels on the upper jaw. In place of the usual teeth of the mouth there are a number of stout teeth on the pharyngeal bones, which are arranged in three rows. It has one single dorsal fin which is longer than the anal. Both of these fins have at their origin on the anterior edge a strong ray, which is serrated in a downward direction. The caudal is of semi-circular shape; the natatory bladder is divided into two sections, with connecting air passages. The scales have an entire edge, and the body is compressed on the sides. The general color of the back and sides is a dark olive brown; the abdomen often of a whitish-yellow or orange tint. The coloring depends, as with all fishes, partly upon the age and season; partly upon the water, the soil, and also upon the food of the fish.

Be it remarked that the carp, which has occasionally been compared to the buffalo fish, has no resemblance to it, with the exception of the similarity of their coat of scales; neither does the flesh of the buffalo fish ever come up to the excellence of that of the carp.

The carp was, in all probability, originally introduced into Europe from Central Asia many centuries ago, and is now common in most of the large rivers. In some parts of Europe, principally in Bohemia, Austria, southern, central, and northern Germany, it has become domesticated. The carp is alleged to have been imported into England in the year 1504; and in Austria, which possesses the most extensive carp fisheries in Europe, the culture of the carp can be traced back as far as the year 1227. Consequently the fish has been domesticated for more than 600 years, and has been improved upon as our stock men have improved horses and cattle. Therefore there are many kinds, or different varieties of carp, but as we have but one kind on the Pacific coast, I need not comment on them.

Growth and Reproduction.

The carp is partial to stagnant waters, or such as have not too swift a current, with a loamy, muddy bottom and deep places covered with vegetation. The carp will, at the beginning of the cold season, seek deeper water to pass that period in a kind of sleep. They do so always in groups of from 50 to 100 or more. The fish does not grow much in the winter; warmth alone seems to exercise a favorable influence upon it, and to promote growth. The carp leaves its winter retreat when the rays of the sun have warmed the water thoroughly, and shortly after this the spawning season commences. The spawning of an individual fish may not take place all at once. Cold, stormy weather will check them; but they will resume it again when it turns warm. The abundance of eggs in the carp is very great, and it is this circumstance which will explain its great increase. A fish weighing from 4 to 5 pounds will contain from 400,000 to 500,000 eggs; other statements figure still higher.

The eggs of the carp are adhesive, and adhere in lumps to the object upon which they fall. As soon as the egg has left the body of the fish it swells up a little, the mucus which surrounds it serving as a means to fasten itself upon some aquatic plant, stone, or brush wood. Those eggs which have no such object to cling to are lost.

The water grass, with its narrow, long, strap-shaped, thin leaves, spread over the surface of the water, and its numerous branches in the water, give the fish a splendid place for reproduction. Such retreats are desirable to have in all ponds. The eggs will develop themselves quickly, if they are in good warm, shallow water, and will hatch in 12 or 15 days. In about 5 days, they consume the substance of the egg and seek food, and with plenty of food and good attention they will grow very fast. Its growth differs, according as the fish inhabits cold or warm water. Warm water is therefore desirable. The normal weight which a carp will attain in three years is from 3 to 4 pounds on an average. Carp may reach a very advanced age, as there are some in Austria over 140 years old. The increase in length only continues up to a certain age; but its circumference will increase up to its thirty-fifth year. There is no other fish that, with the same care, will yield as good returns as the carp.

I have now given a very short history of the carp, and will in my next treat on the construction of ponds.

LEVI DAVIS.

Forestville, Sonoma county, Cal.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Grange Notes From the "Patron."

Memorial resolutions are published as follows: Ceres Grange, No. 64, to the memory of Richard Whitmore. Worthy Assistant Steward. Committee, M. B. Kittrelle, Mrs. H. W. Bronse and George Reich. Placerville Grange, No. 242, to the memory of Sister Hannah Hart. Committee, Mrs. M. J. Cook, — Bryan, J. P. Allen.

Mrs. Lander of Alhambra Grange has the following paragraph in her letter: What is the matter with some of our representatives now seated in state in our Capitol? Did they not, ostensibly, at least, go there to frame laws to govern the strong and protect the weak? Are they afraid of the working woman? Do they fear that the married woman will monopolize the rod of correction, that they would legislate the woman that is womanly enough to marry as not eligible to teach school? Brothers, let us drop this hackneyed expression of "woman's rights," and simply accord to her the right to labor in whatever capacity her Creator fitted her, whether it be to cook, wash, housekeep, plead before the bar, heal the sick, administer to the dying, or teach the living; and if, by perseverance and will she proves herself able to compete successfully with man, reward her equally.

Bro. J. V. Webster writes from the Constitutional Convention as follows: As soon as I received from our Worthy Secretary the several propositions which were passed by the State Grange at its late session, embracing propositions proposed to be incorporated in the Constitution of the State, as previously agreed upon, I called together the members of the Convention belonging to the Grange (twenty odd in number) that the propositions might be duly considered. We have met often since they were received—usually from 8 to 10 o'clock A. M. We have finally adopted most of them, which we have agreed to support, at least in spirit, in Convention. On some of the propositions there was so much diversity of opinion that they were passed over without coming to an agreement.

Worthy Secretary Adams has the following note on taxation: "There are many professional men and capitalists who have incomes of \$10,000 a year, whose names do not appear on the Assessor's books, and consequently do not pay taxes. But let one of these capitalists or professional men take one year's income and buy a farm with it, and by our present revenue laws he will be taxed on \$10,000, on a farm which the best of cultivation, for the first year at least, will not produce an income of \$500, and after it is all brought under a thorough state of cultivation not to exceed \$5,000. Yet the capitalist on his farm expends twice the labor, lives much poorer, and is compelled to pay taxes on land the price of which has been arbitrarily fixed without any regard to its productive capacity or the amount of income it can be made to yield. How any reasonable man can advocate a property tax instead of an income tax, we cannot conceive, and more than all how they can consent to taxing lands used for agricultural, the basis of the prosperity of the State. Agricultural lands require less protection from government than any kind of property that can be mentioned. It cannot be stolen, it cannot be burned up by mobs, and it is seldom trespassed upon, yet it never escapes an undue proportion of taxation."

STANISLAUS COUNTY PICNIC.—A Grange festival will be held at Grange hall, Modesto, on Saturday, December 14th, 1878, at 7 o'clock P. M., under the auspices of Stanislaus Grange, and to which all the Grangers of the county are invited. The refreshments will be furnished as heretofore on such occasions, i. e., by basket contributions, promiscuously from every quarter. The literary exercises will consist of an address by the Worthy Lecturer and R. B. Robinson, also declamations and dialogues by the younger portion of the community. Doors will be open only to Patrons and invited guests. —VITAL E. BANGS.

In Memoriam.

STOCKTON GRANGE, No. 70 P. of H., October 25th, 1878.
WHEREAS, An inscrutable Providence has removed from this earthly field of labor Brother E. J. McDADD. Therefore be it

Resolved, That in his death this Grange has lost a worthy member; that we will miss him from our circle, yet, remembering that he has been relieved from physical suffering, and has entered into rest.

Resolved, That we extend our warmest sympathy to the family of deceased, and pray that He that "tempers the wind to the shorn lamb" will ever be near to comfort and console them.

Resolved, That our Charter be draped in mourning for thirty days; that these resolutions be spread on the minutes of this Grange, and that a copy be sent to the bereaved family. Also a copy each to the Stockton Herald and Independent, California Patron and Pacific Rural Press, with a request for publication. —(Mrs. J. B. Boddy, Mrs. H. L. West and Mrs. L. Wolf, Committee.

OAKDALE GRANGE, No. 160, Stanislaus county, adopted the following resolutions at its first regular meeting after the death of Bro. C. B. INALLS.
That we are called upon to mourn the loss of one of

our members, as it has pleased the Great Master of the universe to remove our Worthy Secretary, Bro. C. B. Inalls, from his field of labor with us, to that field where they toil not, but the weary are at rest. Therefore be it

Resolved, That in the death of Bro. Inalls the bereaved family lose a kind and loving husband and father, the community a valuable and esteemed citizen, and the Grange one of its most active and trustworthy members.

Resolved, That this Grange fraternally extend its warmest sympathy to Sister Inalls in her affliction, and we most fraternally invoke the blessings of our divine Master to comfort and cheer her and to brighten her pathway through the gloom of her sad bereavement.

Resolved, That the Secretary enter these proceedings on the records of the Grange, and send a copy to Sister Inalls, and to furnish a copy to the county papers and Rural Press for publication. —[A. S. Emory, C. R. Calender, Mrs. A. S. Emory, Committee.

WHEATLAND GRANGE, No. 260, November 2d, 1878.
WHEREAS, Again has the scythe of time entered our Grange and a loved and honored sister been taken from our number. Therefore be it

Resolved, That in the death of Sister HOLLINGSHEAD, this Grange has lost a true and worthy sister and the community has lost one who adorned it by her truly charitable and fraternal example.

Resolved, That we tender to the bereaved husband and family, who waited and watched so long by her bedside, our sincere and fraternal sympathy in their deep affliction.

Resolved, That as a token of respect to the memory of our departed sister, our charter be draped in mourning for 30 days.

Resolved, That these resolutions be placed upon the minutes of this Grange; that a copy be transmitted to the bereaved husband of our deceased sister and a copy to the Wheatland Record and the Rural Press for publication. —[Sarah Sparks and Mrs. J. H. Keyes, Committee.

DEATH OF COL. J. M. STRONG.—We learn with regret of the death of Col. J. M. Strong, member of the Constitutional Convention from Merced and Mariposa counties. Col. Strong has long been known in connection with agricultural operations in the San Joaquin valley, being especially famous for his efforts to introduce cotton culture in this State. A dispatch from Sacramento says: "He proved that cotton can be successfully grown on the San Joaquin valley plains; and although from prudential reasons he had not up to the present time entered largely into the business, he was preparing plans for the establishment of a cotton factory, and the growing of the staple on a large scale."

DOLLAR DIAMONDS.—An Eastern advertising agent tries to beguile us into advertising an Eastern firm which proposes to sell solid gold rings capped with "wonderful diamonds" for \$1 each. The advertisement sets forth that the Academy of France is authority that the maker has "really obtained artificially the true diamond." That may all be, but the "Academy of France" has not authority enough to lead us into exposing our readers to swindlers by vendors of imitation gems. We lose the money which we might have received for the advertisement it is true, but we retain our self-respect and the good opinion of our readers, and that is of more value to us than "gold or precious stones;" especially when the latter are of the "wonderful" variety.

OIL MEAL FOR STOCK.—The advantage of a judicious ration of oil meal in the feeding of dairy cows and dairy cattle is well known among stockmen generally. Some of our leading dairymen make a practice of feeding it regularly, and find it excellent in maintaining a healthy condition of the animals, and to furnishing richness for secretion of milk or fat. Attention is called to the advertisement of Kittle & Co., of the Pacific Oil and Lead Works, which appears in another column. We believe their oil meal could be used to advantage by many readers.

AN OPINION IN FAVOR OF THE RURAL PRESS.
"THE PACIFIC RURAL PRESS, San Francisco, Cal., is doing good agricultural work for the Pacific slope, as its articles are high-toned, timely, interesting and reliable. If one desires to keep up with agricultural progress on the Pacific side he could take no better mentor than this paper."—Scientific Farmer, Boston, Mass.

We receive this kind allusion to our work with high esteem, as we regard the writer as a leader in agricultural science, literature and practice; a man whom we delight to honor for the good work he has done and is doing.

CALIFORNIA SILK.—The sewing silk made by the California Silk Manufacturing Co. is a good article, at least we infer so from the fact that our wife charges us to buy it whenever we are sent on such errands. And thus practically proving that it is good, there is another reason why our California ladies should buy it, namely because it is a local manufacture, and the establishment gives employment to a large number of deserving women. We certainly advise all to give the silk a trial in preference to the imported article.

GEN. James A. Dumont, of the steamer inspection service, asserts that travel by steamer under existing laws of the United States is safer than in any other country.

AGRICULTURAL NOTES.

California.

COLUSA.

GROWTH OF THE OAK.—Sun, Nov. 16: We had occasion, last Saturday, to chop into a tree marked as a hearing tree on the Mount Diablo meridian, which was run 27 years ago. The tree was out to itself and might have been classed among the old oaks when marked, as it was about three feet in diameter, and it can be seen that the growth had been slower than the average of oak trees in the valley. It had grown five inches in the 27 years. That is, it covered the marks five inches, which, of course, added 10 inches to its diameter, or 30 inches to its circumference. Many persons do not imagine that the oaks grow so fast as that. As it is certain that the young oak grows faster than the old, and as this one increased a little over an inch a year, in its diameter, would it not be fair to presume that the oaks 30 inches in diameter were not over 30 years of age?

CONTRA COSTA.

THE RAIN.—Gazette, Nov. 16. The rainfall Thursday afternoon and evening amounted to about a half-inch at Martinez, and if there was no more in the country, it will not have gone deep enough for plowing; but, followed by bright, warm weather will bring up the fall-sown grain without exposing it to danger of drying out after starting so late in the season. It will also soon bring the grass for feed, and the weeds on the stubble fields, so there will be a chance of getting rid of some of them by plowing in when the plowing time comes, as it is now to be looked for within a couple of weeks.

MONTEREY.

THE SEASON.—Castroville Argus, Nov. 16: The season cannot be said to have been a prosperous one for the farmers of this valley. On the heels of the almost total failure last year of grain crops, the half crop, and in many places less, this season leaves farmers with little or no surplus, many coming out, in fact—taking account of the two years—on the loss side of the ledger. The result is scarcity of money in every channel of business, for, farming being at the base of trade in this community, every department feels its failures and disappointments just as it is stimulated and strengthened by agricultural successes in more auspicious years. Naturally, therefore, all look forward with anxious interest to the coming season, hoping that the kindness of nature will be manifested in a sufficient though not superabundant rainfall. Our farmers need a good season to balance in its effects the deficiencies they have met with during the past two years.

SACRAMENTO.

SURVEY COMPLETED.—The surveying party which has been in the field since last June laying out a route for the proposed drainage canal which is to discharge the waters of the Sacramento river into Suisun bay, returned to Sacramento Tuesday night, says the Bee, having completed their labors. All that now remains to be done is to prepare the report and submit the same to the Commission for consideration whether the work of building the canal shall be performed or the project abandoned.

SAN BENITO.

FARM WORK.—Hollister Enterprise, Nov. 16: The light of burning stubble has kept the valley well illuminated for the past several nights. This circumstance indicates that ranchers are preparing to commence seeding soon as sufficient rain falls to put the soil in proper condition. Should the season be favorable, a larger acreage will be sown to grain this year, in this county, than ever before. Some of the farmers have already dry sown portions of their ranches, but we believe there has not been as much of this kind of seeding done as in some former years. People seem to have settled down to the opinion that there will be plenty of rain the present season, at least they purpose taken chances. Owing to the great surplus of 1877-8, it will not require so much rain this season as usual; in many places the soil yet retains the moisture within a few inches of the surface.

SAN DIEGO.

RAISINS.—News, Nov. 9: Mr. George Kimball presented us with a box of nice raisins, raised on his place, on National ranch, that are very nice, and were prepared on the ground, under the vines, from the Muscat grape. He has this year some five or six hundred pounds of these excellent raisins, after selling what he wished of the grapes from the vines. His ground is well adapted to raisin grape growing, and the article sent us—large, fine and luscious—shows that the article can be brought along quite easily and well here.

SAN LUIS OBISPO.

SUGAR BEETS.—Tribune, Nov. 16. Mr. D. F. Newson of Arroyo Grande has been experimenting in beet sugar culture. Specimens raised this year have been sent to Prof. Hilgard for analysis. The result is not encouraging. The beets were found to contain 3% of alkali, rendering them unfit for the purpose of sugar-making. Mr. Newson thinks that there are portions of the Arroyo Grande bottoms which are entirely free from saliferous properties, and which will produce a good quality of sugar beets. It is said that the sugar beet absorbs the alkali from the soil. In some portions of France, where beets when first raised were inferior, it was found that by a few years cultiva-

tion the quality improved and the percentage of alkali diminished until the soil was entirely free from it. It is to be hoped that the same result may be reached at the Arroyo Grande. A good sugar beet factory would be of great benefit to this county.

SAN MATEO.

HALF MOON BAY.—Redwood Times, Nov. 16: The last of the threshing was done on the Zabella ranch about ten days ago. The weather is fine and gives the farmers every opportunity to get in trim for the coming season. A great number are building barns and granaries, seed potatoes are very cheap, and we understand that a larger acreage than last year will be put in with that crop. Of course it is risky, but when successful the farmer realizes something from it, which is more than can be said of those who raised large crops of barley.

SANTA BARBARA.

MONTECITO VALLEY.—Eds. Press: The Montecito valley is a lovely place to live in; it has one of the best climates in California for invalids—it cannot be surpassed, it is so even, so free from disagreeable winds, and fog. Its outlook to the ocean is grand and picturesque, with the Santa Cruz island in front of it to break the wind, and send it in just a gentle, cooling breeze. Backed by the Santa Inez mountains and green foothills, it is a perfect little Eden. In the spring, when the almond orchards and wild flowers are in bloom, and the mountain streams all running, it must be seen to be appreciated, as words cannot do it justice. I have been told by persons who have been to Italy, that Montecito surpasses it as a home for the invalid. It is a pity it is not more widely known of, for many a poor sufferer might live there in so much more comfort than in many other places. The indications for coal oil are good, and the Santa Barbara Oil Co. are sinking a well, being now down 500 feet. B. W. C. makes mention of the Sunday and day schools, but does not mention the literary society, of which the members are very proud, and have cause to be.—M.

THE BOSS PUMPKINS.—Press, Nov. 16: C. Shotwell has on exhibition two pumpkins that weigh 182 and 191 pounds each. They were raised in the Carpinteria by Mr. Lewis.

SONOMA.

COAST SURVEY.—Enterprise, Nov. 15: A corps of the Government Coast Survey was recently stationed near Bihlen's point, in this county, below the mouth of the Gualala, surveying and mapping the physical formation of the coast, erecting flag stations, etc., on important points. A second corps will follow in a Government steamer and perfect an accurate chart of this coast for the use of navigators.

HEALDSBURG GRAPE CROP.—Flag, Nov. 14: Constable Snock informs us that about 1,200 tons of grapes are annually produced between the southern districts of Healdsburg and the limits of Cloverdale, all of which ought to be brought to this city and worked up. He says that 350 tons of these have gone to San Francisco at \$3 through the hands of Mons. Bertucci, and 150 tons by Mons. Simi, who auction them on the wharves to Italians for private wine-making, our crop being in demand for that purpose.

HORNED OWLS CAUGHT.—Flag, Nov. 7: Samuel Smith, a farmer two miles above Geyersville, brought to our office on last Saturday a large horned owl, one of two he had caught near his chicken yard. The nocturnal chicken thief weighed about seven and a half pounds, as near as we could judge, the uncanny look of the bird warning us not to take any liberty with it. Mr. Smith states that they snuggle up to chickens roosting on trees, and gradually edge them off the branch, when the owl swoops and there's an end to the chicken. These owls were caught by means of a steel gin trap placed on the top of a post.

SUTTER.

FARMING.—Marysville Appeal, Nov. 16: The farmers of Sutter county are now busily engaged in seeding and harrowing their summer-fallowed ground. The condition of the soil in the absence of moisture is very cloddy and rough, and many large fields must remain untouched for the present. There is undoubtedly a greater area of land summer-fallowed this year in that county than any previous year. This process of cultivating always insures an abundant yield and our enterprising farmers are fast adopting this mode of culture. Dry years as well as wet ones the yield on summer-fallowed land is satisfactory. The more thorough the cultivation the greater the production, and all intelligent and observing farmers realize this fact. Should a favorable season ensue a large area of land will be sown this winter, insuring the largest crop that county has yet produced.

TUOLUMNE.

EDITORS PRESS:—The genial shower is refreshing nature after a long, dry summer. The grass begins to show itself, and if rains keep on as begun we will have another prosperous season. The farmers have been busy hauling grain to our mountain market. Wheat brought from \$1.80 to \$1.90; barley, from \$1.50 to \$1.60 per 100 pounds; hay, from \$15 to \$16 per ton. Although \$17.50 is now demanded, it may reach \$20 before the winter is over. One team is now en route for Oakdale with 21,000 of Columbia marble, all cut for manufacturers' use for tables, mantels, etc. This marble of ours is beginning to be appreciated. Experts declare it is superior in some respects to the Italian. The Palace hotel is ornamented by it. The Broderick monument is also built from the same quarry; and now the

THE MINING AND SCIENTIFIC PRESS PATENT AGENCY was established in 1860—the first west of the Rocky Mountains. It has kept step with the rapid march of mechanical improvements. The records in its archives, its constantly increasing library, the accumulation of information of special importance to our home inventors, and the experience of its proprietors in an extensive and long continued personal practice in patent business, affords them combined advantages greater than any other agency can possibly offer to Pacific Coast Inventors. Circulars of advice free. Address, **DEWEY & CO.,**
Publishers MINING AND SCIENTIFIC PRESS AND PACIFIC RURAL PRESS, 202 Sansome Street, S. F.—1878.



A Country Thanksgiving Sermon.

Ay, Goodman, close the great barn door;
The mellow harvest time is o'er;
The earth has given her treasures meet
Of golden corn and bearded wheat.

You and your neighbors well have wrought,
And of the summer's bounty caught;
Won from her smiles and from her tears
Much goods, perhaps, for many years.

You come a tribute now to pay—
The bells proclaim Thanksgiving Day.
Well have you sown, well have you reaped;
And of the riches you have heaped.

You think, perhaps, that you will give
A part, that others, too, may live.
But if such argument you use,
Your niggard bounty I refuse.

No gifts you on the altar lay
In any sense are given away.
Lo! rings from Heaven a voice abroad;
"Who helps God's poor doth lend the Lord."

What is your wealth? He'd have you know
To hold it, you must let it go.
Think you the hand by heaven struck cold
Will yet have power to clutch its gold?

Shrouds have no pockets, do they say?
Behold, I show you then the way:
Wait not till death shall shut the door,
But send your cargoes on before.

Lo! he that giveth of his hoard
To help God's poor doth lend the Lord.
To-day, my brethren—do not wait;
Just yonder stands dame Kelly's gate;

And would you build a mansion fair
In heaven, send your lumber there;
Each stick that on her wood-pile lies
May raise a dome beyond the skies;

You stop the rents within her walls,
And yonder rise your marble halls;
For every pane that stops the wind
There shineth one with Jasper lined.

Your wealth is gone, your form lies cold,
But in the city paved with gold
Your hoard is held in hands Divine;
It bears a name that marks its thine.

Behold the bargain ye have made,
With usury the debt is paid.
No moth doth eat, no thieves do steal,
No suffering heart doth envy feel;

Ring out the words, who of his hoard
Doth help God's poor doth lend the Lord!
Go get your cargoes under way;
The bells ring out Thanksgiving Day!

Sweet Marjoram.

A Thanksgiving Story.

By LIZZIE W. CHAMPNEY.

"A garden enclosed is my sister, my spouse;—thy plants are an orchard of pleasant fruits; camphire with spikenard and saffron; calamus and cinnamon, with all trees of frankincense; myrrh and aloes, with all the chief spices:—which I have laid up for thee, O my beloved."—*Solomon's Song*, ix. 12, 13, 14; vii. 13.

Margery's spice-garden was not exactly like the one planted for Egypt's daughter by the great Jewish sultan, though the plants were, indeed, an orchard of pleasant fruits, consisting of a hedge-like row of enrrant bushes and a half dozen gnarled, stunted trees, that Bina Hutchins said bore the best "squiches" in all the township. The ground not occupied by the fruits was laid out in orderly little beds filled with "yarba." Thoroughwort and motherwort, for the infusion of bitter teas, to be drunk religiously in the spring of the year, a penitential ceremonial seemingly handed down from the commemoration of the Passover, by the eating of bitter herbs. Other medicinal plants, more grateful to the palate—spearmint and peppermint, pennyroyal, catnip, and hoarhound—grew near by, with arnica for wounds and bruises, lavender for the linen chest, coriander and caraway for the good house-wife's cookies, anise and saffron for spasmy babies, rosemary for perfume, thyme and sage for home-made "sassingers," tansy for batter puddings, with such mild aromatics as fennel and dill for the gentle stimulus to mental exertion needed by the ruminating old deacons, as they listened to the words of the good minister, which drifted down upon his hearers as soothingly as poppy-leaves.

As Margery sorted her herbs, that bright October day, passing some of them through coarse wire sieves, rubbing them fine, and packeting them away in neatly labeled paper bags, while others, not so dry, were tied in bunches and hung from the brown rafters of the attic, a stranger would have noticed an appro-

priateness between the girl and her surroundings.

Her presence seemed to diffuse just such a faint, pleasant perfume. Both the dried bunches of herbs and her pale cheek reminded you that, though faded now, there had been bloom there once. You felt that not very long ago she had seen June, with sunlight and song, warmth and perfume and life; and, though it had all gone from her as completely as from the withered leaves in the little paper bags, her mission, like theirs, was to do good, to give ease to the suffering, and even a mild spice, a cheerful flavor and perfume to all that was monotonous and distasteful about her.

Margery was not called an old maid by the school children. There was not a gray thread in all her wealth of auburn hair. She did not dress in antiquated style, or keep a cat, or drink tea, or belong to the sewing society, or show any of the usual characteristics of old maids. The cosy little parlor looked out upon the spice-garden from a bay window, which Margery had built for her geraniums; and the flowers and the open piano—for Margery was a music teacher—gave the room a very pleasant air. Her music kept up with the times, like her dresses. Both were always modern and pretty. She went to all the parties and musicales (and did not go alone, either). She helped get up all the fairs and festivals and tableaux. Society at Baxter's, the little town where she lived, would have been at a standstill without her. In short, she was not an old maid at all, but only an old young lady. Margery was never slighted, and yet it was probably ten years since she had an offer. She had had her love story, of course; but that was fifteen years ago—and everybody at Baxter's, including Margery herself, would have been very much surprised to have heard that she was going to be married. And yet everybody and Margery were destined to exactly that surprise.

If you had asked the people at Baxter's for Margery's love story, you would probably have received two different versions. Some would have said that it was Jack Bogardus, and some that it was Fred Frothingham; but all would have agreed that she had been "disappointed."

Margery's story, so far as she knew it—for Margery herself did not know all of her story—was this: Jack Bogardus was an orphan and her cousin. He had been adopted by her father, and they had grown up together. But Jack was a willful boy. Margery's father did not understand him, and at last he ran away to California. Margery knew that he was going, and she did not discourage him. It seemed to her that this was really best for all. Jack had promised to come back some day, when he had "made his pile," and claim her for his wife, if she would only wait. Margery had waited, her father had died, and she was left alone. That same year Jack wrote that he had prospered and that he was coming home. The same mail brought her a little box, containing a ring of California gold. It came on Thanksgiving Day, and the day had ever since been a sad one for Margery; for, though Jack came back to the village, and others saw him, he did not even call upon her, and he returned to the West the next day, without leaving any message for her. There had been no explanation since. It was still the same cruel mystery that it had been fifteen years ago. She did not even know at the time that he was in town, for she was in great perplexity and trouble.

Fred Frothingham, the son of the wealthiest man at Baxter's, had been one of the first to enlist when the war of the great rebellion broke out, and it was now the second year of the struggle. On the eve of a battle, not knowing whether he would survive the terrible work of the next day, Fred wrote Margery a letter, telling her that he loved her, and asking her, if he lived to come home, to be his wife.

Margery replied, telling him as kindly as she could how impossible it was. This letter Fred never received, for he was wounded in the battle, his father came for him, and he was brought back to Baxter's the day before the arrival of Margery's cousin. The journey threw him into a fever, and when he was laid upon his own bed, with his mother bending over him, he did not know her, but raved deliriously about Margery, calling her by all the sweet names that his disordered mind could supply.

Mrs. Frothingham imagined from this that Margery and her son were engaged. The possibility that Fred could love and not be loved in return never entered the head of the devoted little woman; and so she wrote to Margery, calling her "my dear daughter," and begging her to come to Fred, for her presence alone could cure him. Margery had no mother or friend to consult, and to her the only thing to be done seemed to be to confide in Mrs. Frothingham; and, taking a little basket of poppy-leaves, to make a pillow for the sufferer, she hurried to the Frothingham mansion. The girl who admitted her told her that Mrs. Frothingham was tired out from watching all night with her son, and had lain down to try to take a little rest; but had left word before doing so that, if Margery came, she was to be shown directly to Mr. Fred's room. Margery drew back at this announcement; but just at that moment the village doctor called to her from the head of the stairs, requesting her to help him administer some medicine to his patient, as he was quite wild. Margery did as the doctor directed, and Fred received his medicine tractably from her hand. A few moments later Mrs. Frothingham came in; the doctor went away, and she stumbled through her explanation, she hardly knew how, and left the fond mother tearful and indignant at her obduracy. It was not until

weeks after that she learned that Jack had been in town on the very day when she had been so faithful to him, and had not even called upon her.

This was all that Margery knew. She had waited faithfully for some explanation; had written to him several times; but her letters came back to her through the Dead Letter office, showing that Jack had never received them and that his present residence was not known at his former address. She never doubted Jack through it all. She was true, and she felt sure that he was too. There was some strange mystery between them. It might never be cleared up in this world; but it would be sure to be in heaven, and they would have all eternity to understand one another in.

Margery could not grow old and sour, for there is always youth and sweetness where there is hope.

Margery was sorting her herbs in the sunny drying-room, which the school children called Miss Margery's herbarium, when she was called to the door by Bina Hutchins. Bina drove a provision cart, supplied in part at the shire town, five miles away, and supplying in its circuit as many villages.

"Mornin', Miss Margery," said the old man, cheerily. "I'm round taking my orders for turkeys for Thanksgiving. Nigh about disposed of the whole flock now. Miss Frothingham bought Sulciman Pasha; they took Achmet Pasha at the hotel; I sold Ismail Pasha and Mukhtar Pasha at the Corners; and the restaurant keeper at the junction spoke for Mehmet Ali last summer, when we saw him struttin' around in our pasture. I feel as if I owed a sight to you, Miss Margery, for naming them turkeys for me."

"The heft of the people in this section are interested in the war—leastways they pertend to be; and when I sheved 'em the names of them turkeys on my order-book, there was een a most a serimmage to see who'd get his name down opposite the high-soundingest of 'em. Dickson, the restaurant keeper, hez it printed on the posters he'll hang in the station on Thanksgiving Day; 'Mehemet Ali beheaded this morning. This great Turk to be ralled for at our free lunch.' And Miss Frothingham told me she was going to put her turkey's name into all her invitations. She shewed me one of the *menos* that that young lady who is stayin' there painted for her on white satin. She's printed Sulciman Pasha in what she calls Turkey red, with guns and moons and little cupidises, in turbans and baggy trowsers all around the border. They do say Fred Frothingham's going to marry her. She's some sort of relation to his fust wife. I say, Miss Margery, it seems kinder enrus to me there shud be so many generals in Turkey by the name of Pasha. The only way I kin account fur it is that it must have been the name of the last sultan. They say that the sultans have wives enough to fill a female seminary, and that the sultan's erack regiment is made of his own sons. I don't know how I should have managed about naming my turkeys if it hadn't a-been for the Pasha family. A whole brood of turkeys came off after you sent me that list of names, and I called 'em Constantinople Pasha, an' Bagdad Pasha, an' Bosphorus Pasha, an' one on 'em Jerky-nek-off Pasha; though my wife said that was kind of mixin' things, fur it seemed to her that Jerky-nek-off sounded more Rooshan than Turkey."

I did very well with the whole flock except in the Sultan, the very biggest and gamest feller of all. 'Ll weigh 28 pounds easy, an' tail-feathers enough to make half a dozen handsome fans. I prided myself on the Sultan, but I'm going to lose money on him. You see the ladies of the Methodist church at B'thesdy Springs hed come to the conclusion that the tabernacle, though it was a good enough place for the summer boarders to get religion in, was too windy and chilly a place to get up any sort of religious warmin' during the winter; an' they'd voted to have a fair about Thanksgiving time to raise money to build a chapel. Well, after they'd engaged the Sultan of me, an' advertised him in all the papers as one of the attractions, what'd they do but conclude they couldn't afford to take him unless I'd donate him. The idee! When I'd been fattening him up all summer expressly fur them, an' declined him to Miss Frothingham and Mr. Dickson, who'd either on 'em have given a good price for him! And the most aggravating thing about it is that Elder Dusenbury has sold 'em his six-year-old lame gobbler; and that every one that tackles him will think it's the Sultan, and my turkeys will lose their reputation."

"I declare now, Miss Margery, the idee just strikes me that the Sultan is just the turkey for you. It would please me fust rate for you to have the best bird in my lot. You must wear out a sight of wings a-dusting, you're so neat; and the Sultan's are strong enough to last a year. I'll throw off a shillin', seeing it's you, and take half out in dieker. One thing I came round fur was to get all the sweet marjoram you can spare. There's allus a call for it about this season."

Margery had stood, while the old man was talking, beneath the little porch, whose pillars had been lifted out of the ground by the strong old vines that twisted about them in such snakey contortions. An amused smile had flickered on her face as she listened. "But, Bina," she expostulated, "the Sultan is entirely too large for a Thanksgiving dinner for only poor little me."

"I didn't know but you might have company," suggested Bina. "The old people from

the Town House haven't had a regular Thanksgiving dinner since the one you gave them."

"Mrs. Dusenbury told me," replied Margery, "that whatever is left from the church festival is to be sent there, so that they are provided for this year. However, I will take the Sultan. You may shut him up in the dog-kennel. We haven't kept a dog since cousin Jack went away. And you may have my whole stock of sweet marjoram; for I shall not kill the Sultan this year, and perhaps I shall give him away." And Bina drove away with the sweet marjoram, leaving Margery peering admiringly into the Sultan's prison.

All this time Jack was coming nearer and nearer, to help her celebrate Thanksgiving; for Jack had his story too.

He had been unfortunate ever since his return to California. Everything had gone wrong. And he did not care, for wealth was nothing to him without Margery. He had come back that autumn years ago to claim her. As he stepped from the cars, the first person whom he met was the village doctor, who shook hands with him pleasantly and offered him a ride.

"What is the news, Doctor," was Jack's first question.

"Everything is about as usual," replied the physician. "Let me see. Fred Frothingham was a friend of yours. Was he not? He has come back from the war, wounded; but I guess we will pull him through. The sweet face of his little nurse would make any man well, I should think, even if he had not the luck to be engaged to her, which Fred has."

"What, Fred engaged?" asked Jack. "And to whom?"

"Why, to your Cousin Margery, to be sure. I thought you would know of it."

"Doctor, are you sure of this?" asked Jack, a little unsteadily.

"Of course, I am. Mrs. Frothingham told me; and I have even more positive proof, for I have just left the house, and Miss Margery was nursing the young man."

After that Jack staid in Baxter's only long enough to see, from the door of the little shop opposite, Margery taking leave of Mrs. Frothingham, at the head of the great flight of stone steps. Then he shut his sore heart up within an iron will, and went back to California.

The years that followed were a long and dreary desert in his life. Perhaps God permits us to live through such years of blackness and weariness to show us by contrast the exceeding preciousness of the joy he has in store for us. And so Jack lived on until the autumn of which we have been speaking. Then all his misfortune seemed to culminate. He could nowhere find employment and he was very poor. As a last resort, he accepted the position of bar-tender in a saloon. He was new to the business, and the proprietor proceeded to give him some instructions. The veteran in drinks first concocted a mint-julep, after some infallible recipe of his own.

"There!" said he. "Try that young man, and own up that you never tasted anything like it in your life."

"I would rather you would taste and see if it is right, sir," replied Jack. A proposition readily complied with by the compounder of intoxicating beverages, and followed by a frightful scene of choking and expectation. "There is something wrong about the mint," he sputtered; and then, examining the pail of green sprays upon his counter, he exclaimed: "Blessed if that stupid market-woman hasn't left me sweet marjoram, instead of spearmint!"

The word sweet marjoram recalled to Jack the dear girl for whom it always seemed to him that the little plant must have been named. What would she have thought of his present occupation? And then and there he resigned his position as bar-tender, obtaining from his would-be employer the little bonnet of sweet marjoram and pressing it between the leaves of his neglected Bible. But now he had nothing to look for subsistence, and he strolled disconsolately towards the depot, wondering what would be the next scene in the strange drama. The train from the mountains was just in, and springing from it Jack was surprised to see his old friend, Fred Frothingham. The two young men greeted each other pleasantly. Fred said that he had been spending the summer in California, and had invested in a fruit-farm, which he hoped to visit once in two years, and that he was now in search of some one to keep it for him.

"I am the very man you want," cried Jack, impulsively. And then, as a sudden thought struck him, he asked, "Shall you bring your wife with you, when you come, Fred?"

"My wife died five years ago," replied Fred, gravely.

Jack staggered as though he had been struck.

"Margery dead?" he exclaimed.

"Margery?" reiterated the other in surprise.

"My wife was Rose Bateman. I would not tell every one, Jack; but your Cousin Margery refused me, and after I met Rose I was not sorry for it."

And so it was settled that Jack should keep the fruit-farm for his friend. "There is a very pretty cottage on it," said Fred, "and with all those pears and grapes, you will soon be a rich man." He was surprised that Jack was not willing to enter upon his duties at once; but the young man insisted on purchasing a ticket to Baxter's with the advance money which Fred gave him.

And this was how it happened that there was a Thanksgiving dinner that year at Margery's, and that the Sultan left his prison in the kennel, and was decapitated on the same evening

with his generals of the oft-repeated name of Pasha.

"Dear me!" said Margery, in dismay, as she dressed the turkey, "and to think that, among all my herbs, I haven't a sprig of sweet marjoram for the stuffing."

"But I have," replied Jack, as he brought forward his Bible, with the little sprays pressed between its leaves. The tears stood in Margery's eyes as he told their story; and I do not think one of the precious leaves would have been used in the Sultan's stuffing had she not thought that nothing was too good for her wedding dinner.

Fred Frothingham was at the wedding. "And now you can understand," said Jack to him, "why I was so anxious to come East. Even in a land flowing with milk and honey one may long for cold water, and all your orchard of pleasant fruits could not make me forget a little garden of herbs."

"And you wanted to transplant one of its flowers to the Pacific coast?" queried Fred.

"What flower?" asked Margery unconsciously.

A peal of laughter ran around the table, and Jack passed up his plate (for Margery had insisted on carving the Sultan herself) with the demure request: "My dear, if you please, I will take Sweet Marjoram."—*N. Y. Independent.*

Chaff.

A HAPPY mother of male twins enthusiastically refers to her treasures as her "sweet boy and boy."

SWARTZMEYER to his wife: "Now, see here, mine loif, better as you had Johnny let a little op von dat candy eatin' obber the first thing you don't know, he haf some toothache in his teeth, and haf been skwallin around all night mit der cholera morbus in his jaw—don't it."

"Girls have no sense of humor!" Edwin cried,

"When Angelina smiled not at his chaffing,

"You men are so ridiculous," she replied;

"If we had much, we should be always laughing."—*Punch.*

LAST week a Fultou boy got angry with his mother, and went to bed without his snapper that he might wring her heart with sympathy. When he was creeping down stairs to get some pork and beans after the family were asleep, he collided with a door casing and broke his toe! Moral.

THE celebrated Dr. Adam Smith, who was a very logical thinker, hearing his servant complain of a pain in the small of his back, said to him: "The pain, John, is not in your back, it is in your mind." "Deed, sir," replied John, "giff ye'll tak' it oot o' ma pack and pit it into my mind, I'll be singularly obleged to ye."

SOME man with an eagerness for fame has invented a spring-seat saddle that will rock a man to sleep on the hardest going animal. What this country needs is some kind of a saddle that will hold a man down on the roof of a horse when he suddenly, and without warning, points at the sky with his tail.

"MARIAH! Mariah! please let me in," said a man to his wife, who was looking out of the window watching him trying to open the door with a toothpick. "I sh tread on my key, and its all flattened out."

A YOUNG lady from the city, boarding for the summer at a farm-house on the borders of Delaware county, visited the dairy attached and watched the country maid in her toil with marked attention. "Your task is a laborious one," she remarked to the maid. "Somewhat, ma'am" was the reply of the maid. "Nature is indeed wonderful in her workings," continued the lady. "Observe the green grass in the fields, and in a short time it is converted into milk, and from milk to butter. After the formation of butter I have been told that the milk is termed buttermilk." "Yes, ma'am." "Is there sufficient nutriment in it to be of any practical use?" "Yes, ma'am." "If I am not exhausting your patience may I ask you what use is made of buttermilk?" "We feed some to the hogs, and what's left we feed to the boarders."

THE WIFE IN HOUSE DESIGNING.—It is commendable in woman to desire to look well and dress in the best taste; and how many anxious days and even nights are given to the consideration of a new suit, in order to have every trifle enhance the beauty of the wearer! The home surroundings may have even more effect to make or mar the attractiveness of the occupants, and should command an amount of interest commensurate with greater permanence and value. The *paterfamilias* is very apt to order a house of his architect in the same way that he orders a coat of his tailor, and his instructions are more of the nature of "glittering generalities" than they should be. The wife, on the other hand, ought to know the ways of the home establishment in every small item of daily life; and, if not able to arrange to meet all wants, she should be competent to designate them clearly to the expert who is employed to satisfy as many of them as practicable. The home department belongs essentially to woman, and domestic architecture should early be a part of her education. Her fitting and destined occupation is the control of a home, and even though years of life in boarding or hired houses may intervene, she should look to a permanent home as one of the greatest blessings to strive for. While the husband labors for the needed money to pay for lumber and work, she should be busy contriving how to get the largest amount of convenience, comfort, and beauty for the money when it is earned.

Young Folks' Column.

Mud Pies.

[Written for the RURAL PRESS by ALBERT R. BAUCKNER.]

Two merry wee faces,
Four laughing blue eyes,
With hands all bedabbled,
Sat making mud pies.

Such fun they were having,
These dear little tots,
A building up houses
And queer looking grotts.

Their houses and churches
They builded so tall,
That they quickly came down
With a crash and a fall.

Then with a merry laugh
And a clap of the hand,
They viewed their fallen towers,
And their ruins of sand.

And gaily at building,
Again did they go,
And soon were uprearing
Their castles laid low.

Many men in this world,
Not nearly so wise,
Might learn from these children
A making mud pies.

And when low in the dust
Their hopes are blown down,
Go straightaway to building
For conquest and crown.

San Francisco, October 30th, 1878.

My Pretty Dress.

[Written for the RURAL PRESS by ALVENA.]

You asked me, Minnie, to tell you how I ever got money enough to get my pretty dress.

It happened just this way. When we lived on Austen creek in the summer of 1876, there came a gentleman from San Francisco (a doctor) in poor health, who wanted to board with us and find among our hills what he could not regain in the city. Mother did not want to take him, but at last consented on condition that I should take the entire charge of his room and do the most of the cooking.

The first thing to be done was to prepare the spare room; the carpet had been taken up and dusted, the walls white-washed and the windows cleaned but a few weeks before, so that much was done.

The furniture consisted of a nice three-quarter bed, a low rocking-chair, one common chair and a table; not much to make a pretty, comfortable room out of to be sure, but my courage grew stronger as I got interested in the work. I made long white muslin curtains that would reach from the ceiling to the floor, and hung them over the green shade at the windows, tied them back with scarlet ribbons to match the scarlet in the gray carpet. I made cushions for both chairs of scraps of linen left from my dress, and covered them with scarlet crocheted work. I made white curtains for the table, tacked them around the sides, put white marble oil-cloth on the top, placed the wash-bowl and pitcher on it, and hung the looking-glass above.

I made a pretty wall-pocket by cutting a round piece of card-board seven inches in diameter, then I cut it in half, using part for the bottom; cut the center out of the other piece, leaving a rim of half an inch; punched holes around the edge of the bottom piece at equal distances apart, and corresponding holes in the other piece. I soaked the straws in warm water, cut them in half and slipped them through the holes; the three straws at each corner I left full length to form the handle. Ribbon was then woven in and out between the straws and sewed at the back of the pocket; straws were crossed at the top and tied with ribbon to form the handle. This I hung by the toilet table for the comb and brush.

I hung a lovely picture of "Evangeline" over the bed, and the room was complete; although not elegant, dainty and homelike. The doctor liked his room very much, and remained with us two weeks. When he went away he paid the handsome sum of \$8 per week, and with that money I purchased my pretty suit.

Duncan's Mills, Sonoma Co.

[Our young reader's experience in fitting up a room so nicely will be of value to many of our young folks we doubt not. We would not advise them to wait for a sick doctor, because there are not enough of this interesting class to go around, but to go to work and fit up a room prettily just to show their skill and help their mothers in the delightful work of home adornment.—EDS. PRESS.]

A NEW GAME.—The juveniles have a new game called "Blind Man's Mockery," out of which they are getting lots of amusement. One of the party is blind-folded, and while he is counting twenty-five the others range themselves as miscellaneous as possible in a row, and hold out their hands. The "blind man" slaps somebody's hand, at the same time inquiring, "Who are you?" The youngster slapped rather impolitely replies, "None of your business," and the "blind man" is obliged to guess his name from the sound of his voice. He can guess but once, and if he fails, must try some one else until he guesses right, when the one whom he detects becomes "the man." The game depends upon quickness of ear, as well as upon the ability to disguise the voice, and it shows a wonderful difference in children in both respects.

GOOD HEALTH.

Weaning the Baby.

Dr. Brochard in a French medical journal lays down four rules to be observed in weaning infants, as follows: (1.) It should never be done suddenly, one regimen being gradually transformed into another, so that the child may be progressively prepared for weaning. The time for it, as Trousseau justly observes, cannot be fixed by the almanac, but it must depend upon dentition. As soon as the teeth appear we should commence our preparations. About the fourth or fifth month we may accustom it to the sucking-bottle, substituting this for one of the sucklings at night, and afterwards for another; and even for a fortnight after weaning the child should have nothing but milk. At a later period farinaceous food and broths may be added. Many women begin to give their infants this kind of food far too soon, and at the time of weaning cannot get them to take the milk which should then form almost their only diet. Solid food should be delayed for some weeks, and given only as the teeth appear. (2.) The child should never be weaned until it has teeth. (3.) It should never be weaned during very hot weather when diarrhoea is apt to occur. (4.) It should not be weaned while in the act of cutting its teeth, the intervals which occur between the cutting of the different groups of teeth being selected.

Preparation of Eucalyptus.

We have given before a number of preparations of the medicinal principles in the eucalyptus. As the material is so abundant in this State, its use must be an object of interest. The *Journal of Chemistry* translates from a French source the following formulae:

Tincture of Eucalyptus.—Take of dried leaves of eucalyptus (cut up) 1 part; alcohol, at 80°, 5 parts; allow to macerate for ten days, then filter.

Wine of Eucalyptus.—Take of dried leaves of eucalyptus, 30 parts; alcohol at 60°, 60 parts; good white wine, 1,000 parts; allow to macerate in the alcohol for 24 hours, then add the wine; after ten days, filter.

Hydro-Alcoholic Extract of Eucalyptus.—Take of dried eucalyptus leaves (cut up) 1,000 parts; water, 3,000 parts; distil to obtain the essential oil; make an aqueous extract of the material remaining in the apparatus, and to it add alcohol at 60°, 1,000 parts. Filter the alcoholic solution and evaporate it to the consistency of an extract; when nearly cold, mix the volatile oil thoroughly with it.

LIME JUICE FOR RHEUMATISM.—In the *Canada Lancet*, Dr. A. H. Chandler calls attention anew to the use of an old remedy, and reports several severe cases in which good results followed its use. Without regard to the condition of the bowels—unless previously much constipated—he begins with at least ten ounces of lime juice, increasing rapidly to eighteen or twenty-four per diem—from half an ounce to one ounce or more every hour, with not less than double or treble the quantity of cold water, usually diluted and sweetened to the patient's taste. He finds that even on the second day the amendment is decided, and the disease, in acute cases, more particularly sthenic or asthenic, generally subsides on the fourth or fifth day of treatment. He usually prescribes one grain of opium, with or without lead and tannin, night and morning, in order to restrain the bowels which the juice has a tendency to relax. The effects of this treatment are, he says, rapid diminution of joint swelling, diminished perspiration, steady fall of pulse, which often becomes quite slow, with a slight tendency to syncope, the majority of cases requiring quinine and supporting food about the sixth day. Such vigorous treatment should evidently be undertaken only under the supervision of a competent physician.

THE CHINESE GOVERNMENT DENOUNCING OPIUM.—An important and very stringent edict regarding the cultivation of the poppy appears in the *Pekin Gazette* of March 9th last. It is worthy of note that the largest number of victims and the earliest victims to the famine have been the opium smokers. The edict now issued speaks of the people as foolish, coveting wealth, and forgetful of the injury that is being done by the cultivation of the poppy instead of cereals, and it enacts that for the future the cultivation of the noxious drug must cease; disobedience thereto to be visited with severe punishment. This edict applies to the whole of China. The district magistrate of Tientsin has personally visited the opium-smoking resorts, and closed them all. Soldiers and officials are strictly prohibited from smoking, under heavy penalties.

FOOD ADULTERATION IN ENGLAND.—According to official reports during the last year in London, there were 4,177 samples of food and 110 samples of drugs submitted for analysis. Of the former there were 515, or about one-eighth of the whole number examined, pronounced adulterated; but of the 110 samples of the latter examined, only seven were found to be either more or less adulterated.

DOMESTIC ECONOMY.

Meat Preserving for Household Use.

EDITORS PRESS:—As the hog-killing season is fast approaching, I think it well to send you some good recipes that I have used for years, for putting up the fresh meat for future use.

Potted Sausage.

With a fork prick the sausage skins every few inches, to prevent them from bursting; then pack them in stone jars, and set in the oven of the stove to cook; the stove must not be too hot or they will do too fast. If you have a brick or clay oven, put them in after the bread has been baked, and leave them in over night, when they will be thoroughly cooked. The jars will not be full; fill up out of the other jars within three inches of the top, and cover with the melted lard; when cold, tie up and put away in a cool place. I have had sausage and pudding in this way in Eastern States, in cool cellars, until the following September; but here it will not keep so long—though still will keep long enough to pay for the trouble of putting up. When wanted for use take off the top lard; take out the sausages, heat in a pan and they are ready for the table. Pour the melted lard on those in the jar, and tie up again. If you have not the jars to spare, cook your sausages in paus, and pack them in tin cans; let your lard cool a little before pouring on, or it will melt the solder. I have roasted the ribs and backbone pieces, and put down the same way. Be sure your meat is done well through, or it will not keep.

Pudding.

or the Dutchman's "worst," which the Irishman said "Be jabbers was the best."

Take the head of the hog, the liver, kidneys, a large handful of the skin, the stringy bits of meat left from the sausage, also the beef bones; boil all together until the meat falls from the bones; then take off, pick out all the bones, chop the meat—not so fine as sausage-meat, season with sweet marjoram, pepper and salt to taste. Now put it in an iron kettle and cook it well for fifteen or twenty minutes, stirring well to keep from burning on to the bottom of the kettle; then put into jars, press down with a spoon as you fill up, and cover with lard, and put away the same as the sausage. When wanted for use it is either cut down cold or heated. Now take the liquor the meat was boiled in and stir into it corn-meal until it is the consistency of mush or hasty pudding. Salt to taste, boil, stirring often, about a half hour; take off, put into dishes, to get cold; cut into three-quarter slices, and fried, it is excellent for breakfast. You must put some fat into the pan before frying, or it won't turn nicely.

Sauce.

Take the pig's feet and ears and tongue. Boil until the bones come out easily; then take out, pick out all the bones, put salt and pepper in to taste, then pour over the liquor it was boiled in, having it well boiled, so as to be a nice stiff jelly, when cold. It is nice eaten cold, with vinegar. I like it when first boiled, while warm, with ground cloves and vinegar. I found these potted meats very convenient during hay-making and harvesting. It saved me a great deal of work in cooking, and came in nice when I could not get fresh beef or mutton.

Santa Barbara, Cal.

M. H. R.

BUCKWHEAT CAKES.—One quart of buckwheat flour and a half of Graham meal. Mix with lukewarm water into a batter, stir in a teaspoonful of good yeast sponge or a half cent's worth of baker's yeast; mix in an earthen or stone vessel, and set over night in a warm place to rise. If the temperature and yeast have been just right, the batter will be light and sweet, and not need soda. It should be considered a mistake when the ferment needs neutralizing, and care taken to set cooler or correct the yeast.

APPLE AND TAPIOCA PUDDING.—Put a teaspoonful of tapioca into a quart of warm water before breakfast; set it where it will keep warm for three hours; stir it from the bottom once or twice and keep covered. Pare and cut in thin slices five or six nice tart apples, and lay them in the bottom of the pudding dish; add a heaped cupful of sugar, dissolved in hot water, to the tapioca; stir well together, and pour over the apples; bake slowly for two hours. To be eaten with whipped cream flavored with a little lemon or orange. Good either hot or cold.

GREEN CORN ON THE COB.—Remove the husks and silk from full grown ears of corn in which the milk is well developed. Put them into sufficient boiling water to cover. Boil gently in a covered kettle from 20 to 30 minutes, according to the age of the corn. It is better cooked by steam for half an hour. Corn which requires more than half an hour to cook is not good.

DELICATE CAKE.—When making cocoanut-custard use the whites of the eggs as follows: One cup of white sugar; five tablespoonfuls of butter; whites of six eggs; one teaspoon of sweet milk; three cups of prepared flour, or to the same quantity of common flour add one teaspoonful of soda, and two of cream-of-tartar sifted in the flour. Flavor with orange, lemon, or vanilla.



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SAN FRANCISCO:
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NEW ADVERTISEMENTS.

Gang Plows, Sulky Plows, and Single Plows, Manufactured by the Sweepstake Plow Co., San Leandro, Cal.; John Rogers & Co., General Stock and Sale Yard, S. F.; Jones & Thompson, dealers in Hay, Grain and Feed, S. F.; 1,600 Acres of Land For Sale, Farmers and Mechanics' Bank of Savings, S. F.; The New Beekeepers' Text Book; Oil Cake Meal, Kittle & Co., S. F.; Exotic Gardens and Conservatories, F. A. Miller & Co., Prop's S. F. Lompoc Temperance Colony, Lompoc, Cal.; Angora Goats for Sale, J. H. Love, S. F.; Hannay's Nursery, San Jose, Cal.; John Hannay, Prop.; California Farmers' Insurance Co., Thos. Flint, President, S. F.; Seeds, W. A. Sanders, Fresno, Cal.

The Week.

Before another issue of the PRESS lies before the reader the good old Thanksgiving rejoicings and festivities will have lighted all our homes and filled our hearts with the joys of family reunions, wholesome cheer and the deeper sentiments of praise and thanks to the Source whence come all blessings. The giving of thanks, if it be genuine thanksgiving, is heart-work. Although the day formally devoted to the purpose is generally marked by feasting and merry-making, these are but attendants upon the central idea. Therefore let each one begin aright with the observance of the day. Let the thought be of heartfelt thanks for blessings, and as the mind swells with the thankful spirit, let it blossom out in kindly feelings and bear fruit of kind words and kind deeds to all who come within the circle of its influence. Thus may one and all rejoice and bless the day. It is to be feared that too many of us in this hard and busy contest of life almost crush out the heart, and feelings of genuine thanksgiving, of disinterested, cordial sympathy, and impulses to pure and noble generosity are foreign to our thought and conduct. A life thus robbed of its highest attributes is untrue to our humanity and an outrage upon the work of divinity. Let us all have a thanksgiving this year that will make us better. Let the soul glow with the rapture of praise and adoration; let the heart burn with loves of home, of kin and of humanity. Let the strong breezes of a higher nature sweep through the dry bones of our affections and noble impulses, and cause them to spring into life and action. The world will be the better for it.

The Situation in Wheat.

During the last week the wheat market has been at a standstill, but, on Tuesday, it showed signs of excitement and advance in prices. This sharp change in the current of affairs does not result from the markets abroad, for they are quiet, and by the *Mark Lane Express* report, printed in our Market Review, it will be seen that the London market for American wheat is quoted lower. So far as one can judge at this hour the advance here is in sympathy with a flurry of excitement in New York and Chicago, caused by reported gigantic cornering engineered by James R. Keene, who has figured largely on this coast both in stock and grain speculations. Upon another page will be found a telegraphed report from New York, which we reprint as a matter of news. It is impossible now to determine how much reliance is to be placed upon the statements made. If Mr. Keene has accomplished the corner credited to him in this report, the immediate effect will be an advance in wheat values here, although the full influence of his effort will not be felt until later in the season, when the English and continental markets are more in need of wheat than they are at present. There is no reason in the outlook so far as it can be seen at present, why Mr. Keene should not succeed in his project, providing he has secured wheat enough and has money enough to hold it. He has bought it very low, and an advance must come during the winter, as we have claimed heretofore. We do not approve of such methods of trade as Mr. Keene employs. If he makes millions it is no benefit to the man who produced the grain. But as there is no law by which such speculations can be stopped it may be as well to take the cheerful side of the matter, and that is the prospect that by his selfish projects the markets may be so advanced that our local growers who are still holding wheat may be able to close out at a good price sooner than they would if the regular course of supply and demand had not been interfered with. However, it is not worth while to count much on Keene's corner until more is known about it. At present it is merely a rumor which all should give attention to, but not pin faith upon.

Some weeks ago we took the ground that there was little reason to expect much improvement in wheat before January 1st, unless there should be some unexpected complication. Apart from this Keene rumor, this still seems to be the deduction. So much wheat has already gone forward from the United States that the English and continental markets do not feel any lack of supplies, and consequently prices must remain at a low level. Consumption will ere long reduce supplies and excite inquiry. Meantime foreign statisticians are figuring out the probabilities in future supplies and demand, and the result is that, as we have often stated, the prospective supply is short of the amount of wheat that will be required, before another harvest, and therefore an improvement in value must come, even though it be late in coming.

The best review of these foreign computations on the supplies and requirements for the year 1878-9, comes to us in the *London Farmer*; and as the statements contain much information concerning the deeds of wheat-producing countries generally, as well as a general conclusion on the main point at issue, we shall draw from the *Farmer* the following facts: The wheat yield of the world for 1878 was discussed at a recent wheat congress, in Vienna. The total production of the continent of Europe is placed at 140,064,000 qrs., or nearly 7,000,000 qrs. short of what there would be had every country a full average. The American continent plus Egypt, Australia, and minor countries, make up the total to 190,785,000 qrs. The estimated contribution of the United States, 41,160,000 qrs., is much the largest on the whole list. The total of the world's harvests is assumed at 195,396,000 qrs. on an average, so that even with America's wealth the present year is not rich in grain. The wants of Great Britain head the list of imports needed: 12,000,000 qrs. are the assumed want. France comes next. Her wants are not easily estimated. A couple of months ago 5½ million qrs. was thought extreme, but since then threshings have been discouraging, deliveries small, and the estimates have risen to 7 millions. This latter estimate is probably in excess of the reality.

The other countries requiring imports are Switzerland, Italy, Belgium, and Holland.

Italy is said to want a million qrs., Switzerland even more. Total wants are put at about 23,000,000 qrs. Export countries are thus reckoned:

	Qrs.
Russia.....	5,500,000
Austro-Hungary.....	2,250,000
Roumania.....	700,000
United States.....	13,700,000
Various.....	700,000
Total.....	22,850,000

We give these estimates for what they are worth. They certainly deserve attention, for even though they may in some cases underestimate exports and over-estimate wants, yet they show *beyond serious doubt* that the balance of supply and demand for the present cereal year is a close one, and that low prices cannot be maintained, as though there were a great excess of supplies forthcoming.

PISCICULTURE.—Our readers will notice a new department in the *RURAL* this week under the title Pisciculture. We begin this department to foster and promote in our own State, the progress which is now being made in fish-farming all over the world. The idea of making available waters tributary to the supply of wholesome food is not a new one, but it is now being reduced to practice by governments and individuals to a greater extent than ever before. There are thousands of our farmers who have natural ponds which can be well stocked with fish, or they can easily construct artificial ponds where they have water for the purpose. These enterprises will not only add beauty to the farm and interest to farming, but where they are properly managed they will yield substantial return in fine fish food for the family, or for sale in the neighborhood. Mr. Davis, who is preparing a series of articles for us on carp culture, is a practical fish farmer and speaks from experience. When he concludes, we trust others who have experience with trout, bass or other fish, will take up the strain and help us all to profit by their researches. The department is also open to the public-spirited gentlemen of the California Fish Commission, for the publication of communications which they deem of public interest, either for the preservation of fish from illegal inroads or the practical details of propagation, on which they are well informed. We trust and believe the department will be of value and interest to many readers.

LECTURE ON THE GLANDERS.—An interesting chemical lecture on the glanders was delivered in the College of Agriculture at the State University, last Saturday, by A. De Tavel, veterinary surgeon. The time of the lecture was fixed by the securing of a diseased horse for illustration, and this was just too late for notice in last week's *PRESS*. The lecture was well attended by the students and others who heard of its occurrence, and many were thus given a better idea of this dread disease than could be obtained except by demonstration by a skillful operator with an actual subject. Dr. De Tavel discussed the disease thoroughly and in detail, but we have no report which can do the lecture or the lecturer justice. Indeed, it was a lecture to be heard, in connection with its illustrations, to be appreciated. We are glad that the way is being prepared for the discussion of such important themes at the University. Although we could wish that the lecturer had voice loud enough to be heard in all the counties of the State, much good can be done by impressing the subjects upon the minds of the young men at the University. Some day the plan may progress so far that patient investigators from the University may be able to go out through the State and expound the truth that is in them for the general good. This is certainly a conclusion to be looked for, and we believe it will ultimately be attained in some form.

BONE FERTILIZERS ON WHEAT.—Mr. W. W. Read, of Erie, Pennsylvania, reports some experiments just concluded by him with the use of super-phosphate and bone dust on wheat. He took several plots of ground, on one he applied 810 lbs. of phosphate to the acre, and harvested 37½ bushels of wheat. On another he applied 590 lbs. bone dust, and harvested 37½ bushels of wheat. On other parts of the same field, where no fertilizer was applied, he harvested 14 bushels of wheat to the acre.

GREAT financial distrust continues to exist in England.

QUERIES AND REPLIES.

Root Grafting—Flooding to Retard Growth.

EDITORS PRESS:—I want to do some root grafting of apples and plums this winter and have no seedling stock. Now, cannot I take roots from my trees, such as I can get hold of, and graft into them, or will they not do? Please tell me what you know about it. Also my orchard puts out too early in the spring, so that late frosts cut short the fruit crop, and it is too extensive to mulch. I propose to put on the ground ice-cold water four inches deep all through the warm weather in March, but not let it touch the trunk of the trees. It will freeze nights and be hot enough in the middle of the day to melt what ice forms during the night. Will the trees stand it or will it kill them?—A SUBSCRIBER, West Las Animas, Colorado.

Although grafting on portions of roots succeeds with many plants, we should not think it practicable enough to be profitable in the way our querist proposes. The orange tree is reported to be worked that way in some localities; that is, the portion of the tap root, which is sometimes cut off when the trees are lifted in the nursery, is grafted with an orange scion and another tree results ere long. Root grafting succeeds very well with many plants as we have said, but it is chiefly employed in the greenhouse propagation of rare plants, and then very favorable conditions of air, moisture and heat are all provided. The French have applied root grafting to the propagation of woody plants, but it is generally used with herbaceous plants. We think our querist would succeed better and get much quicker returns in buying and planting thrifty grafted trees if he has no seedlings to graft himself.

We have heard of flooding to prevent injury by frost, but not in the way proposed. We have never had trees situated just as these would be, and cannot tell from experience what the result would be, but upon theoretical grounds we should consider the experiment rather a hazardous one because of the prolonged submergence at that season of the year. If any reader has experience bearing on this point we should like to hear it.

Good and Bad in Dairy Production.

EDITORS PRESS:—An argument having been unsatisfactorily continued in a social circle, it was unanimously decided to solicit your opinion, which will decide the ease, if you will favor us. Would the milk from a cow picketed on alfalfa, with an assortment of food, corn stalks, hay, pumpkins, and tomatoes, with an abundance of water, be preferable in any degree, as for children's use or others, to that of one kept in a small enclosure with several other cows, with only hay to eat, and in such small quantities that, after licking up the last straw from the midst of several inches of their droppings—they, poor and weak-looking, and the first mentioned being fat and healthy?

Would butter, made from cream permitted to stand until it was all covered with mold on top, be as healthful to eat or cook with, as when the cream was churned every day, being worked into nice, hard rolls—the first being churned late in the day, and never becoming hard or workable?—A SUBSCRIBER, Los Angeles, Cal.

The above questions answer themselves, if they be correct statements of facts in each case. Upon this presentation of the matter there is no doubt whatever in the conclusion. Not only are milk and butter produced in the better style described more wholesome for food, but the product of the evil treatment is quite apt to be charged with disease and death.

Sugar Cane.

EDITORS PRESS:—Please inform me through your valuable and interesting columns: 1st. Whether any attempt has been made to propagate or raise the "sugar cane" in any part of this State, and if so, with what success? 2d. Whether it is best propagated from the seed or from slips? 3d. Whether the seed or slips can be procured short of some point in the Gulf States, say New Orleans?—ORRA GARVIN, Kingsburg, Fresno county, Cal.

Sugar cane has been very successfully grown in Kern and Los Angeles counties, and probably in other counties which we have not now in mind. Cane sugar has also been produced this year on the Redondo ranch in Arizona. There seems no trouble practically in the growth of the cane in several parts of the coast, but whether sugar can be made at a profit with the cost of labor in this State, and its cheapness in outside producing regions, is a much harder question. The plant grows readily from good seed, and we presume there is enough of this for experimental purposes already in the hands of local seedsmen or growers. Perhaps some one having the seed will write to Mr. Garvin.

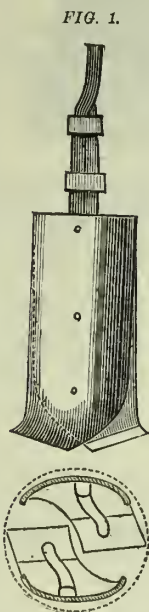
The Growth of the Interior.

We feel a constant satisfaction in the marks of interior growth and progress in California. We have, of course, a general pride in the progress of the great metropolis, San Francisco, but we see such advantages to our agriculture in the building up of trade and manufacturing centers all through the State in proximity to the producing fields of our farmers, that we count this scattered progress much more valuable than a concentrated one. In this State the wings are clipped from many a promising productive enterprise by the relentless enginery of transportation. Create consumers everywhere, is the secret of our general productive welfare. These facts are called to mind by some statements made by the *Stockton Independent*, concerning the growth of the grain trade of that city. The *Independent*, says: "Two of our most reliable dealers have been making a careful computation of the number of tons of grain received and shipped since the opening of the season (from July 1st to November 1st), the figures being principally taken from the books of the various dealers. By this estimate it is shown that 91,727 tons of grain have been shipped (including 628 tons of rye and 3,899 tons of barley), and that 60,000 tons of wheat are now stored in the various warehouses of the city, making a total of 151,727 tons of grain of the crop of 1878 that have been handled in this city. Over 1,000 tons have been received by rail since November 1st and as much more by teams, none of which is included in the above. In addition to this amount the dealers confidently estimate on receiving from 35,000 to 40,000 tons more before the season closes and the next year's crop begins to come in, as there are at least 75,000 tons yet up the valley on the line of the railroad and 25,000 tons on the West Side which will come out as soon as the river rises sufficiently to be navigable. They think they are safe in calculating on receiving one-third or more of this gross amount, if the proportion of the amount already shipped to this place and to San Francisco holds good. This will swell the aggregate trade of the year to about 190,000 tons, or 6,333,333 bushels worth in round numbers \$6,000,000."

Pacific Coast Algæ.

The richness of our coast in algæ is becoming generally known at the East, through the efforts of local scientists like Dr. Anderson, of Santa Cruz, and others. Mrs. Prof. Gunning devoted much time during her recent visit to this coast in making a collection of these plants, and her work is attracting much attention at the East. At a recent fair in Boston this collection was shown, and the notes which the *Boston Journal* makes of it will contain much news even to our own citizens who have never studied vegetable life on our sounding shore: In making the collection Mrs. Gunning was aided by resident botanists, especially by Dr. Demmick of Santa Barbara and Mr. Cleveland of San Diego. The entire order of sea plants is of great general interest to the botanist, and of especial interest to many others, because of their use in the arts or adaptation for food. The nereocystis represented on the Atlantic coast by the huge, leathery, horny laminarias, is to the Pacific waters what the *Sequoia gigantea* is to the Sierras. Growing in deep water, their huge length, sometimes of 1,500 feet reaches the surface, where it is floated by means of cysts or bladders, and often interferes with the navigation of vessels. In severe storms it is up-rooted and driven on the shore in such masses as to form, with other seaweed and sand, staunch breakwaters. In Mrs. Gunning's volume there is a young plant, *Nereocystis Lutkeana*, measuring a few inches, which shows the hold-fasts by which it anchors (having no root) and the cyst which gives it its generic name. The plant at this stage may be looked for in July and August. The *Macrocytis Pyrifera* is represented in the collection only by a fragment of a frond, which is sufficient, however, to show a very curious mode of leaf or frond dissection. If one wants to delve in the very portals of the botanical world, they may read some lessons from this Pacific collection. The Atlantic coast has rich and lovely varieties of algæ, but the Pacific exceeds her by far, if one may judge by the collection on exhibition, which claims to show nearly all the species that have yet been discovered on the Western coast.

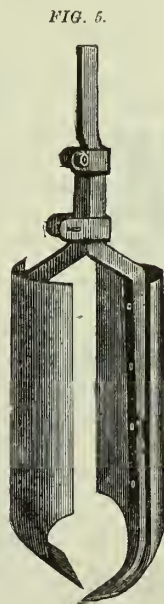
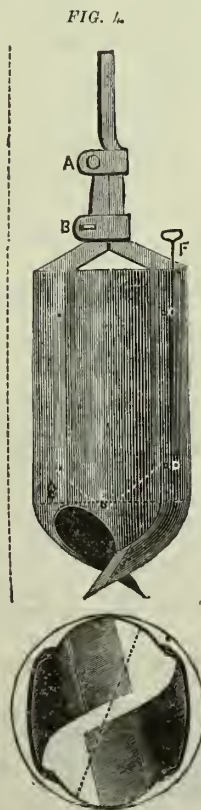
MUSHROOMS AS EGG-INDUCERS.—The coming of the rains brings forward an abundant crop of mushrooms in many parts of this State. They are so plenty that the price sometimes hardly pays for gathering. We read in foreign exchanges some statement which lead us to advise our poultry growers to experiment with this material, to test the truth of its alleged value in bringing hens up to their business at certain times in the year. The following is a method said to be largely employed in many parts of Germany, more especially in Nassau, with the object of inducing hens to continue to lay at periods of



EXCAVATOR WORKED BY HORSE-POWER.

the year when they are wont to discontinue that useful occupation. The edible fungi of all sorts that may be within reach are collected, dried, and ground into powder. A mixture is then made of half a pound of the powder with one pound of ground linseed husks, two pounds of rye and wheat flour, and half a pound of ground acorn powder; a paste is prepared from it with the aid of a little water, and small pellets of this, about the size of a pea, are given to the fowls daily. To which of the several ingredients the "egg-compelling" powers of this

inch iron-plate. The lower portion of these pods, after forming the cup-like curve, are shod with knives or cutters, which are inclined in two directions, so that when the auger is revolved they will engage the earth at the inner corners first, and cut down gradually with a draw-cut. The outside points stand farther than any other portion from the center of the apparatus, as is indicated by the dotted circles. Thus so small a portion of the auger touches the side of the bore-hole, that there is a minimum of friction. Moreover free access of the air to



EIGHTEEN-INCH EXCAVATOR AND IMPROVED SAND AUGER.

mixture are to be attributed our contemporary has neglected to tell us. We presume the virtue lies in the edible fungi so carefully collected. And if this be the case, it would not be necessary to use all the other substances mentioned, some of which are not easily attainable by those who desire to experiment.

ON FILE.—"Window Gardening," G. H.; "Sonoma Viniculturist's Meeting," H.; "Household Education," W.; "Story for Boys," N. V.; "Apiary," R. W. K.; "This and That," R.; "Up San Gabriel Canyon," A. P. K.

THERE is trouble in the Peruvian Cabinet.

Artesian Wells.—No. 7.

Improved Tools.

In the last article, rough cuts and descriptions showing the general character of well-boring tools were given. To-day we give cuts of improved apparatus. All the tools represented are patented, and the cuts of the same copyrighted by Charles D. Pierce, manager of the Pierce Well Excavator Company, No. 4206, Elm Avenue, Philadelphia, Pa.

Figs. 1 and 3, represent two views of a 17-inch auger. The shells or pods are made of quarter-

boring continued through this. The cutters are of three-eighth inch steel, and so fastened with rivets that they may be removed and new ones substituted. The shells are attached to cast-steel arms, which are hinged so that when the auger is drawn up full, and the collars or bands (shown in cuts) slipped up, the shells swing open, and the debris falls out. It is said that this auger will bore through anything except solid, hard rock.

Fig. 5 represents an 18-inch auger, the construction of which can be gathered from the cut. Fig. 4 shows the same, with the sand-sides and valves attached. In both cuts the marginal dotted lines indicate the size of the borehole, no part of the tool but the outer points of the cutters being allowed to touch the sides of the hole. The key, B, Fig. 4, can be removed so that the shells may be spread, either to discharge debris, or to admit of the entrance of rocks nearly the size of the borehole. The valves, Fig. 4, are hinged about E, the dark dotted lines showing them closed, the lighter lines indicating their position when open. The position of their axis is shown by the dotted diameter, in the horizontal projection, below Fig. 4. The valves may be lifted up, for discharging purposes, by means of the rod F, Fig. 4. Only one valve need be lifted, and hence but one of these rods is necessary.

Fig. 2 shows one of these excavators, as worked by horse-power. By means of hook-wrenches men may revolve the rods and do the boring. A, B, show clay-pipes; C is a wooden-pipe; these are of little value where pressure has to be exerted in forcing the tube. Iron is generally used, as explained in a previous article. D is an extra shaft. Eight revolutions fill the auger. It is drawn up and emptied every two feet. The man at the crank feeds the auger and raises it when filled. In boring hard material the auger must be pressed down by some weight on the rods. When men are boring some of them frequently sit on the wrenches while others turn.

Improved Sand Auger.

Some kinds of sand, gravel and quicksand, will not slide up into any kind of an auger over a foot deep, unless there is something to stir the sand and elevate it. Fig. 6 represents an improvement intended to manage such material. This auger has a spiral elevating core, an air passage down the center of the core, C (an inch in diameter), which prevents suction. The core is revolved and allowed to drop below the cylinder, A, far enough to fill. The cylinder does not revolve with the auger. When the auger-worm is full, it is drawn up into the cylinder, and the sand, slush or gravel, is held by the cylinder and leather flaps or valves, E E, when all is drawn up together. The contents are discharged by sliding the cylinder up two feet. D is an adjustable set-screw and ring to regulate the sliding cylinder, A. The cylinder can be removed for clay boring.

None of these tools are adapted to boring in hard, solid rock. When this is encountered and must be bored through, other tools are needed, as indicated in previous articles. In our next we will consider improved apparatus for drilling wells.

CANADIAN BEETS.—In case our readers may wish to measure their beets by those grown elsewhere, we note that Canadian exchanges make mention of some mangels, shipped by Wm. Rennie, the Toronto seedsman, to be exhibited at the Royal Metropolitan root show, which was held at Islington, London, on the 14th and 15th of November. The shipment consisted of about 40 monster specimens, including nine long red mangels, one of which, trimmed, weighed 63 pounds, and the other eight, trimmed, aggregate 427 pounds. Our Canadian authority says: "They should have had at least two weeks more of growth, which would have materially added to their weight." Yes; they need it. A California show beet is not thought to be in good flesh at all, if it does not nearly double the Canadian average weight.

NEW CALIFORNIA BUTTERFLIES.—We notice that in the *Canadian Entomologist*, for October, Theodore L. Mead, of New York, describes two new butterflies caught by him in this State. He names them *Chionobas Ivalda* and *Chrysophanus Editha*. All that he says of them is the technical description and the statement that the insects were found in the neighborhood of Lake Tahoe.

the space beneath the auger, is allowed so that when the latter is drawn up no suction will interfere. Other devices have been tried to overcome this suction; the edge of the shell has been turned over, forming an air-tube; pipes have been used; the side of the shell has been flattened;—but with no flattering success, as the air passages so formed are soon filled with debris. The dots on the edge of the pods show where sand-sides and valves may be attached, thus converting the auger into a pump. These attachments are necessary in boring in quicksand. When great distances must be sunk through quicksand, a curb is put in, and the

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For from \$25 to \$50 I will select and survey for you a good claim, giving full details of its quality and adaptability to different kinds of agriculture or stock raising. I locate Pre-emption,

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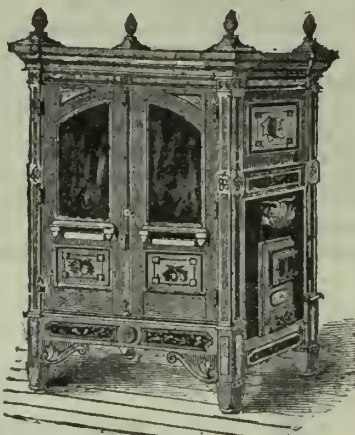
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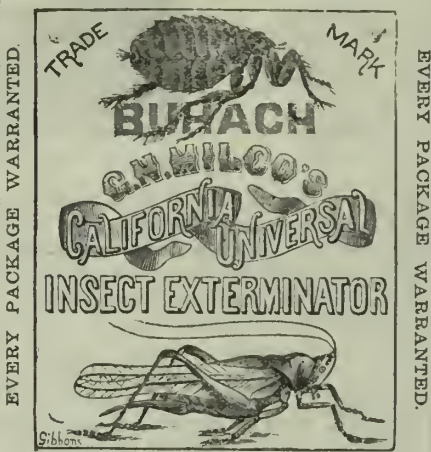
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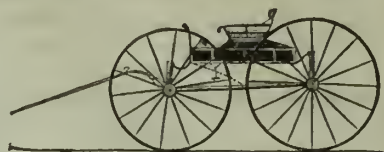
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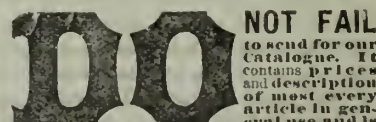
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* * * Guide to the Vegetable and Flower Garden will be sent FREE to ALL CUSTOMERS. It contains instructions on the culture of Fruit, Nut, and Ornamental Tree Seeds, Alfalfa, etc.

R. J. TRUMBULL & CO.,
419 and 421 Sansome Street, S. F.

SEEDS. SEEDS.

IMPORTED.

Crosby's Extra Early Marblehead Mammoth } Sweet Corn.
Stowell's Evergreen }
Mexican Sweet, New }

Early Canada } Yellow Flint Corn.
Early Dutton }

Long Red Mangel Wurtzel } Beet Seed.
Yellow Globe }
White Sugar }

ALSO, EVERY DESIRABLE VARIETY OF VEGETABLE AND FLOWER SEEDS, GRASS AND CLOVER SEEDS, ETC., OFFERED AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,
No. 317 Washington Street, San Francisco

1878-9.

W. R. STRONG & CO.,

FIELD, GARDEN, LAWN and TREE SEEDS.

Our stock is full, fresh and reliable. In these essential particulars we claim to be unexcelled.



We have largely increased our list of varieties, having imported from the very best growers both in the East and Europe.

Garden and Flower Seeds

Put up in small packages for the RETAIL TRADE, as also in bulk. All DEALERS IN SEEDS will find it for their interest to send their orders to us. We make specialties of

ALFALFA, RED CLOVER, TIMOTHY, Red Top, Kentucky Blue Grass, Hungarian Grass, Millet, Lawn Grasses, Etc.

Also, FLOWERING BULBS of every description.

 Catalogues furnished free on application. 

— WE ALSO DO A —

Wholesale Commission Business,

Handling all kinds of California Green and Dried Fruits, Nuts, Honey and General Merchandise.

All orders promptly attended to. Address

W. R. STRONG & CO.,
Nos. 6, 8 & 10 J Street, SACRAMENTO, Cal.

E. J. BOWEN'S SEEDS.

A General Assortment of

GARDEN and FLOWER SEEDS

Neatly put up in papers and packages with description of variety, general directions for cultivation on each paper, and bearing my name, are for sale by responsible merchants throughout the Pacific States and Territories. My stock of

CLOVER, GRASS,

VEGETABLE, and Miscellaneous SEEDS, in bulk, is also large and complete.

E. J. BOWEN,
Seed Merchant and Importer,
815 & 817 Sansome St., San Francisco.

A NEW AND PERFECT HORSE SHOE.



Made of welded Steel and Iron with continuous calk.

Acknowledged to be the best shoe in the world. Prevents interfering. Lameness usually caused by shoeing entirely prevented by its use. Horses having quarter-cracks, tender feet, and Corns travel with ease. Trial set with nails sent on receipt of \$1.00.

Send for free illustrated pamphlet to

The

John D. Billings Patent Horse Shoe Co.,
161 and 163 Bank St., New York.

BREEDERS' DIRECTORY.

CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 323 Front street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importers and Breeders of Thoroughbred Poultry. Eggs for hatching.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California, Breeder of Thoroughbred Poultry. Send for Circular.

SWINE,

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

A. J. TWOGOOD, Riverside, Cal., Importer and Breeder of Pure Bred Poland-China Hogs.

W. & J. ROBINSON, Hanford, Tulare Co., Cal., Importers and Breeders of Thoroughbred Berkshire Swine and Pure Brown Leghorn Fowls. Trios a specialty.


Poultry.

THOROUGHbred POULTRY.

116 Acres

DEVOTED TO

FANCY POULTRY.






Unlimited Range.

Healthy Stock.

Largest Yards on the Coast.

Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.

 Safe arrival of Fowls and Eggs Guaranteed 

 Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents.

Send stamp for price list. Address

M. EYRE, Napa, Cal

EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

Grangers' Bank of California,

42 California Street,

SAN FRANCISCO CAL.

Authorized Capital - \$2,500,000,
In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

OFFICERS:

PRESIDENT.....G. W. COLBY.

MANAGER AND CASHIER,
ALBERT MONTPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

BENNETT, PATTERSON & CO.,

Manufacturers and Dealers in

Furniture, Bedding, Etc.

Walnut, Marble Top and Cottage Sets a Specialty.

Salesroom, 442 and 422 1/2 1st Street, Auzerais Building,
SAN JOSE, CAL.

COMMERCIAL HOTEL,

Nos. 273, 275, 277 and 279 Main Street, Smith's Brick Building, STOCKTON, California.

FRED. C. HAHN, - PROPRIETOR.

Rates, \$1.25 and \$2.00 per day. This popular Hotel has 61 well-appointed rooms, has been refurbished and refitted in the most elegant manner, and is the most comfortable and commodious Hotel in the City. Large, pleasant rooms for families. A Coach will be at all Trains to carry Passengers free to the Hotel.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, November 20th, 1878.

The only news is in the Wheat market, and there a better speculative feeling is discernible. The market is somewhat affected by rumors mentioned elsewhere, but it is not yet known what weight to give them.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.		
Thursday....	9s	8d@	9s	11d	9s	11d@10s	2d
Friday.....	9s	6d@	9s	10d	9s	9d@10s	2d
Saturday....	9s	6d@	9s	10d	9s	9d@10s	2d
Monday.....	9s	6d@	9s	10d	9s	9d@10s	2d
Tuesday....	9s	6d@	9s	10d	9s	9d@10s	2d
Wednesday..	9s	6d@	9s	10d	9s	9d@10s	2d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.		
1876.....	9s	6d@	9s	9d	9s	9d@10s	1d
1877.....	12s	8d@	12s	10d	12s	10d@13s	3d
1878.....	9s	6d@	9s	10d	9s	9d@10s	2d

The Foreign Review.

LONDON, November 19.—The *Mark Lane Express* says: The very cold weather throughout the Kingdom, with heavy snow, hail and rain, have seriously delayed agricultural operations. Fortunately, field labor was fairly advanced before the weather broke, but dry weather is now desirable to enable Northern farmers to end the autumn sowing. Notwithstanding the cold weather, and the beginning of what promises to be a long and severe winter, there has been a want of buoyancy in the Wheat trade, which is very disappointing to sellers. The heavy rain having prevented threshing, supplies of English Wheat have been curtailed in the country markets and Mark Lane. While the condition of the bulk of offerings has undergone further deterioration, daily complaints are heard that millers are obliged to use a large proportion of dry foreign produce in their manufactures, hard Russian and Indian varieties having been most in request for this purpose. Imports of foreign Wheat into London have been moderate. The bulk of the supply was shipped at Cronstadt or St. Petersburg. Notwithstanding the small arrivals at ports of call, the floating cargo trade has been quiet for American Wheat at a decline of about a shilling per quarter, while Russian sorts have been steady. Barley is firm, and Maize lower.

Freights and Charters.

The *Call* says: Freight market inactive and rates nominal. The ship *Rufus E. Wood*, 1,477 tons, has been taken for Wheat to Cork, private terms, said to be 37s 6d.

Eastern Grain Markets.

NEW YORK, November 16.—Though the Wheat market is reported quiet, the amount handled here daily has been quite a half million bushels, largely for export, and this has kept the market firm in spite of an increase in the visible supply of 1,000,000 bushels during the week, which is now 100% greater than at this date last year. Clearances at all the Atlantic ports for four weeks ending yesterday were 7,827,454 bushels—a decrease of nearly 5,000,000 bushels compared with the previous four weeks, which, however, was a period of unparalleled activity. There are indications of a coming revival in export trade, especially to England. Corn is a shade firmer, and the shipments are increasing. The quality of the incoming crop is excellent, and the yield unparalleled.

CHICAGO, November 16.—A steady market has prevailed this week, but everybody stands ready to jump with the turn of the tide. At present, there is nothing to encourage holders of grain particularly, except that rates are phenomenally low. Wheat maintains a relatively higher price than Corn or Oats, and it seems difficult to urge prices up. Sales for December, 80½¢ to 82½¢. Corn sold at 30½¢ to 31½¢ for December. Oats sold at 19½¢ to 20¢, and were firmer than the other cereals. Rye sold at from 45¢ down to 44¢ cash. Barley sold from 80¢ up to 86¢ cash. Provisions were a trifle firmer, closing at nearly outside prices. Sales of December Pork, \$6.75 to \$7.97½. December Lard, \$5.77½ to \$5.97½.

Eastern Wool Markets.

NEW YORK, November 16.—The market is still in a more or less unsettled condition, caused by the desire of many holders to force their stocks at the best prices obtainable, regardless of the future. Some few holders exhibit more confidence, and though willing to meet buyers at market rates, are not inclined to still further reduce prices. Low grades of stock are meeting most attention from manufacturers, as it is claimed that the present quality of goods making can be produced from such as well as by the use of better descriptions. Ohio combing and delaine has sold during the week at 37½¢ to 38¢, and X, XX and above Ohio at 35¢, though occasional parcels of extra choice have realized a shade above these rates. A feature worthy of note has been an inquiry

from London, and the shipment of samples of Ohio there, the low current rates here having attracted the attention of foreign dealers. Among the sales reported are: 162,000 lbs Spring California, at 19½¢ to 20¢; 2,000 lbs scoured do, 50¢; 3,000 lbs Fall do, 13¢; 3,000 lbs fine Utah, 23¢; 20,000 lbs Colorado, 14½¢ to 15¢; 1,000 lbs do pulled 17¢; and 1,000 lbs Valley Oregon, 58,000 lbs Territory, 2,000 lbs Arizona, and 40 bales sheepskins, on private terms.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Oct. 30.	WEEK. Nov. 6.	WEEK. Nov. 13.	WEEK. Nov. 20.
Flour, quarter sacks..	27,713	30,172	58,506	127,964
Wheat, centals.....	258,303	176,632	187,424	144,304
Barley, centals.....	64,858	68,891	58,544	21,692
Beans, sacks.....	16,201	16,287	18,755	12,507
Corn, centals.....	2,829	5,214	10,040	6,925
Oats, centals.....	24,567	7,376	8,720	23,014
Potatoes, sacks.....	25,258	20,166	15,897	24,552
Onions, sacks.....	1,025	468	883	771
Wool, hales.....	6,461	3,128	2,011	1,341
Hops, hales.....	1,207	253	257	534
Hay, hales.....	2,270	1,515	1,173	752

BAGS.—Bags are dormant. The nominal rate for Grain Bags is 9¢ to 10¢.

BARLEY.—Barley is quiet. We note sales of 1,000 cts fair Brewing at \$1.15; 440 good Coast at \$1; 150 fair Coast Feed at \$7½¢; 110 do at 85¢.

BEANS.—Last week's prices are still maintained. Receipts have declined a little. We note sales of 1,300 sds Small White, \$1.37½ per cwt; 42 sds Bayo at \$2.07½; 41 do Pea at \$2.50; a lot of Red and Pink at \$1.75.

CORN.—Corn is in large receipt; prices a little lower and sales of Yellow reported difficult. We note sales of 500 Large Yellow at \$1.05; 1,000 choice do at \$1.05; 150 mixed Small White and Yellow at \$1.05; 410 Small Yellow at \$1.10; and 214 choice White at \$1.10 per cwt.

DAIRY PRODUCE.—Fresh roll Butter has declined a point. Supplies are ample, according to demand, and much is rather low in quality. Consumption is still running largely on the packed goods.

EGGS.—Eggs are also a point lower, fresh California rating at 42¢ per doz.

FEED.—Hay receipts are small, and choice Wheat Hay has advanced to \$16.

FRESH MEAT.—Beef is a shade firmer, although prices are unchanged; Mutton is steady, and Pork has a lower tendency.

HOPS.—No change in rates. Sales 30 bales California, 10¢; 180 bales Washington Territory, 8¢.

OATS.—Good Oats sell readily. We note sales 200 and 150 choice Humboldt at \$1.55, 100 good do at \$1.47½, 100 choice Oregon at \$1.60, 2,000 do good milling \$1.55 per cwt.

ONIONS.—Onions have advanced sharply to 4¢ a pound for all kinds of good. The vegetable is very scarce.

POTATOES.—Potatoes of nearly all kinds have declined, and receipts are heavy. Our list shows to-day's wholesale rates.

PROVISIONS.—There is good demand for Cured Meats of all kinds; but prices are shaded down in sympathy with Eastern markets.

POULTRY AND GAME.—Prices continue low. Turkeys do not show any Thanksgiving spirit at all, but are lower than for several months. This is sometimes followed by a good advance a day or two before Thanksgiving.

WHEAT.—Prices are unchanged as yet, but there is far more inquiry. We note sales: 15,000 cts. choice Milling at \$1.75, 1,800 good Milling at \$1.72½, 1,050 good Shipping at \$1.71½, 2,800 do at \$1.70, 12,000 sds off grade at \$1.55 per cwt., 3,000 cts. good Shipping at Valjejo at \$1.67½, 3,600 choice Milling at Valjejo at \$1.70 per cwt.

WOOL.—Choice Wool is in good demand at former prices, and most lots have been cleared out. Defective Wools are selling rather faster, but there is no change in prices. We note sales of 200,000 lbs various, at 9¢ to 17¢, as to quality.

FRUITS AND VEGETABLES.

[WHOLESALE.]

FRUIT MARKET.		WEDNESDAY M., November 20, 1878.	
Apples, box.....	25	do pared.....	18
Bananas, bunch.....	2 50	do.....	8
Cocconuts, 100.....	5 00	Pitted.....	15
Cranberries, bbl 12 50	14 00	Prunes.....	8
Figs, lb.....	4	Raisins, Cal, bx 2 00	25
Grapes.....	75	do, Halves.....	2 50
Limes, Mex.....	7 00	do, Quarters.....	2 75
do, Cal, per M. 5 00	7 50	Blowers.....	2 75
Lemon, Cal M.....	25 00	Malaga.....	2 75
Sicily, box.....	9 00	Zante Currants.....	8
Australian, bx 7 00	7 50	VEGETABLES.	
Oranges, Mex.....	35	Beets, cts.....	50
M.....	40	Beans, String.....	4
Tahiti.....	40	Cabbage, 100 lbs	40
Cal.....	40	Carrots, cts.....	40
Peaches, box.....	40	Cauliflower, doz	50
Pears, box.....	40	Cucumbers, bx, 1 00	25
Pineapples, doz. 3 00	4 00	Egg Plants, box 1 00	1 25
Plums, lb.....	4	Garlic, New, lb.	2
Quinces, bak.....	75	Green Peas.....	4
St'berries, chst 5 00	6 00	Lettuce, doz.....	10
DRIED FRUIT.		Parasit, lb.....	2
Apples, lb.....	3	Horseradish.....	8
Apricots.....	15	Squash, Marrow	6 00
Citron.....	23	fat, lb.....	7 00
Dates.....	9	Summer do, bx.....	1 50
Figs, Black.....	4	Tomato, 50 lbs bx	30
White.....	6	Pumpkin, cts.....	50
Peaches.....	7	White.....	50

Gold, Legal Tenders, Exchange, Etc

[Corrected Weekly by SUTRO & CO.]

SAN FRANCISCO, November 20, 3 P. M.
LEGAL TENDERS IN S. F., 11 A. M., 994/999.95. SILVER, 2 @11. GOLD IN New York, 100.
GOLD BARS, 890/910. SILVER BARS, 82/23 cent. discount.
EXCHANGE ON New York, 1/4, on London bankers, 42/4 @43. Commercial, 50; Paris, five francs, 10 dollar; Mexican dollars, 891/904.
LONDON Consols, 95 9/16; Bonds, 105 1/2.
QUOTATIONS IN S. F., by the bank, 1/4 lb, 40¢ to 41¢.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., November 20, 1878.

BEANS & PEAS.		Almonds, hd shld	
Bayo, cts.....	1 87½	Soft shld.....	14
Butter.....	2 50	Brazil.....	14
Pea.....	2 32½	Peanuts.....	13
Red.....	1 75	do.....	5
Pink.....	1 75	Filberts.....	15
Small White.....	2 32½	ONIONS.	
Lima.....	1 00	do.....	2 00
Field Peas.....	1 00	Union City, cts.....	2 00
BROOM CORN.		Sau Leandro.....	2 00
Southern.....	2	Stockton.....	2 00
Northern.....	3	Sacramento River.....	2 00
CHICORY.		POTATOES.	
California.....	4	Petaluma, cts.....	87½
German.....	6½	Humboldt.....	75
DAIRY PRODUCE, ETC.		Caffey Cove.....	87½
BUTTER.		Early Rose.....	50
Cal. Fresh Roll, lb	30	Half Moon Bay.....	60
Fancy Brands.....	4	Kidney.....	25
Pickled Roll.....	24	Sweet.....	100
Pink.....	21	POULTRY & GAME.	
Western.....	12½	Hens, doz.....	6 00
New York.....	27½	Roosters.....	4 50
FEED.		Broilers.....	3 50
CHEESE.		Ducks, tame.....	7 00
Cheddar, Cal, lb.....	8	do, Mallard.....	3 50
N. Y. State.....	12	Goose.....	2 00
Gilroy Factory.....	11	Wild Gray.....	2 00
FLOUR.		White do.....	1 50
Cal. fresh, doz.....	4	Turkeys.....	16
Ducks.....	12	do, Dressed.....	18
Oregon.....	35	Snake Eng.....	15
Eastern.....	18	do, Common.....	50
do by express.....	27½	Qual, doz.....	9
Pickled here.....	25	Rabbits.....	50
Hare.....	25	PROVISIONS.	
Bran, ton.....	15	Cal. Bacon, Hvy, lb	10
Corn Meal.....	25	Medium.....	10
Hay.....	7 50	Light.....	11
Middlings.....	22	Lard.....	10
Oil Cake Meal.....	34	Cal. Suet.....	9
Straw, bale.....	40	SEEDS.	
FRESH MEAT.		Alfalfa.....	5
Beef, 1st quality, lb	5	Canary.....	4
Second.....	4	Clover, Red.....	15
Third.....	3½	White.....	50
Mutton.....	3	Cotton.....	6
Spring Lamb.....	5	Flaxseed.....	3
Pork, unseasoned.....	3½	Italian Rye Grass	35
Dressed.....	5½	Perennial.....	35
Veal.....	4½	Millet.....	10
Milk Calves.....	6	Mustard, White.....	25
do choice.....	7	Brown.....	15
GRAIN, ETC.		Rape.....	3
Barley, feed, cts.....	85	Ky Blue Grass.....	17
Brewing.....	15	2d quality.....	16
Chevalier.....	15	Sweet V Grass.....	100
Buckwheat.....	1 50	Orchard.....	25
Corn, White.....	1 05	Red Top.....	13
Yellow.....	1 00	Hungarian.....	8
Small Round.....	1 12½	Lawn.....	50
Oats.....	1 25	Mesquit.....	25
Milling.....	1 40	Timothy.....	7
Rye.....	1 27½	TALLOW.	
Wheat, Shipping.....	1 62½	Crude, lb.....	7
Milling.....	1 67½	Refined.....	9
Off Grades.....	1 40	WOOL, ETC.	
HIDES.		FALL.	
Hides, dry.....	16	San Joaquin, free.....	10
Wet salted.....	7½	South'n Coast, do.....	10
HONEY, ETC.		Sac. and Northern.....	13
Beeswax, lb.....	30	Mendocino & Hum.	16
Honey in comb.....	11½	do.....	16
do, No 2.....	8	Southern, burry.....	8
Dark.....	8	Northern, do.....	11
Strained.....	5	Oregon, Eastern.....	16
HOPS.		do, Valley.....	21
Oregon.....	8		
California.....	8		
Wash. Ter.....	8		
Old Hops.....	3		
NITS-Jobbing.			
Walrus, Cal.....	8		
do Chile.....	7		

Land to Rent.

I have over 5,000 acres of level land ready for the plow, on the Reading Ranch, in Shasta County (which adjoins Tehama County on the north.) Good for wheat, rye, barley, oats and corn. Crops have never been known to fail on this or the adjoining land.

Crops Sure.

A large portion of the tract is fine bottom land. The whole is level and fair tillable land. Rent, with improvements, from \$1.50 to \$3 per acre, ½ cash in advance, and the balance after harvest. Railroad through the tract. Excellent local market. Climate good, wood and water plenty. Rainfall averages about 30 inches. Come and see the land.

EDWARD FRISBIE, Prop'r.
Anderson, Shasta Co., Cal.

Come and See.

GOAT MEN, ATTENTION!

500 to 600 Head of

ANCORA COATS,

Ranging from ½ to 15-16ths in grade, will be sold in lots to suit (not less than 25 head to the lot)

Delivered at Milton Station, Stockton and Copperopolis Railroad.

For further particulars apply to
J. H. LOVE,
Room 7, 240 Montgomery St., San Francisco.

Another Compliment.

LOS ANGELES, May 21st, 1877.
MESSRS. DEWEY & Co., Patent Agents, S. F.—Gentlemen:—I have just received my letters patent on machine for opening oyster shells, and am in receipt of you upon your success. I shall not only contribute to your own business, but also that of friends. Thanking you, gentlemen, for your promptness and the very thorough manner in which you have prosecuted this matter, I am, yours truly,
T. W. TEMPLE.

INSURE IN THE



The only HOME COMPANY not exempting its Stockholders from Individual Liability for Fire Losses.

Cash Capital paid up, - - \$200,000
Assets, - - - - - \$326,617
Surplus to Policy Holders, - \$324,000
And Unlimited Liability of Stockholders.

THOS. FLINT, President. F. K. RULE, Secretary
I. G. GARDNER, Vice-Pres't and Gen'l Agent.

OFFICE:

209 Sansome St., San Francisco.

HANNAY'S

NURSERIES,

SAN JOSE, CAL.

I wish to invite attention to my large and well assorted stock of

FRUIT AND ORNAMENTAL TREES,

Consisting in Part of Apple, Pear, Cherry, Peach, Plum, Prune, Apricot, Almond, Nectarine and Olive Trees.

Also, a full assortment of

Small Fruits, Shade and Ornamental Trees and Plants.

My Trees are Healthy, Stalky and well grown.

JOHN HANNAY,

(Successor to HANNAY BROTHERS), San Jose, California.

LOMPOC

Temperance Colony.

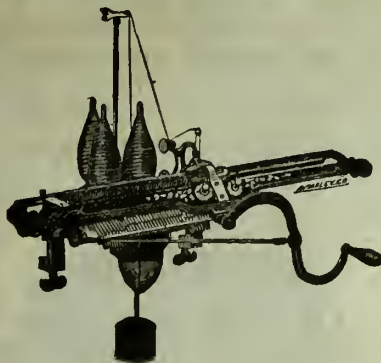
45,654 49-100 ACRES.

Cheap and Desirable Homes

THE IMPROVED.

Lamb's Family Knitting Machine.

Awarded First Prize Medal at Vienna Exposition, and two Medals awarded by the U. S. Commission at Philadelphia, 1876.



IT IS THE ONLY MACHINE

That knits flat or tubular work of all sizes; Narrows and widens on hosiery or tubular work; Knits a regular right-angled heel, as by hand; Narrows off the toe; Knits a sock or stocking complete; Knits mittens or gloves of any size without seam; Forms genuine Ribbed or Seamed work; Knits the Double, Flat, or Fancy webs; Knits an elastic-seamed-stitch Suspender with button-holes; Knits the Afghan stitch, Cardigan Jacket stitch, Fancy Ribbed stitch; the Raised Plaid stitch, the Nubia stitch, Shell stitch, Unique stitch, Tidy stitch, etc. It is now the standard machine for manufacturing, and the only family knitter that fills the bill. Local agents wanted. Send for circulars to

J. J. PFISTER & CO., General Agents, Manufacturers of knitted goods and dealer in woolen yarns. 120 SUTTER STREET, Room 46, San Francisco.

TO LADIES—SILK.

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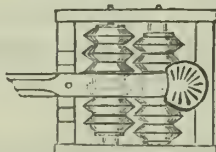
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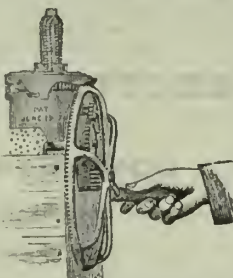
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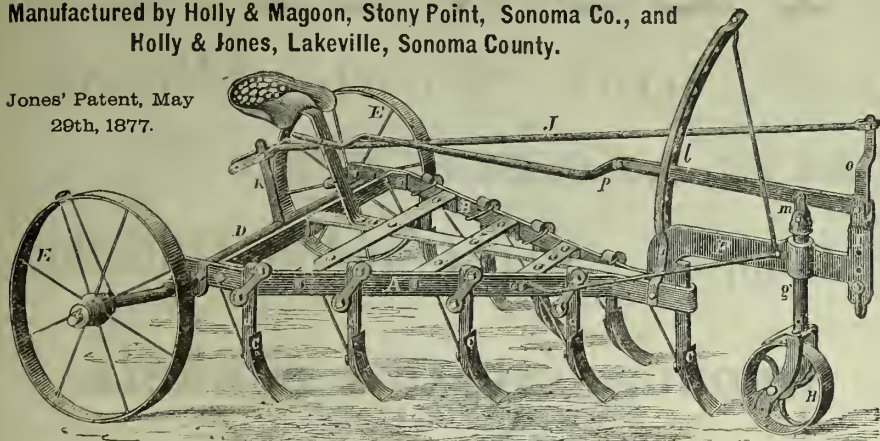
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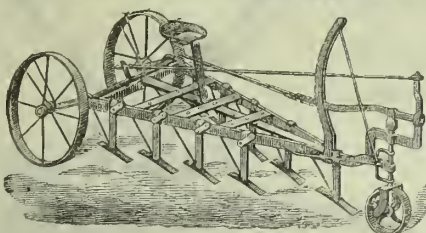


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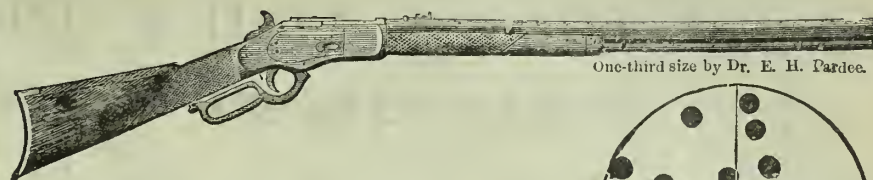
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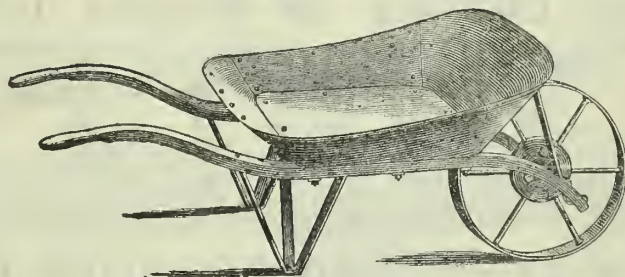
SOLE AGENT FOR THE PACIFIC COAST.

FRANCIS SMITH & CO.,

MANUFACTURERS OF

THE PATENT CHANNEL IRON WHEELBARROWS,

SHEET
IRON PIPE.



IRON PIPE.
SHEET

The Strongest Barrow Made. These Barrows are made by Superior Workmen, and of the best material. All sizes kept constantly on hand.

Lap-Welded Pipe, all Sizes, from Three to Six Inches. Artesian Well Pipe. Also, Galvanized Iron Boilers, from Twenty five to One Hundred Gallons.

Iron Cut, Punched, and Formed for making pipe on ground, where required. All kinds of tools supplied for making pipe. Estimates given when required. Are prepared for coating all size of pipes with a composition of Coal Tar and Asphaltum.

Office and Manufactory, 130 BEALE STREET, San Francisco, Cal.

PACIFIC**Bone Coal and Fertilizing Material Co.**

Office, 21 Sansome St., San Francisco.

Pure Bone Meal, Superphosphate, Animal Fertilizers,

Bone Meal for Chicken and Stock Feed.

In order to introduce our fertilizers, and to prove that we are using nothing but pure materials, and being positive that when properly used they will double the yields of most crops, and at the same time enrich the soil, we are willing to furnish small lots, of 100 pounds and upwards, at low prices.

For Circulars, giving information concerning the use of the fertilizers on different crops, apply to or address the Company's office, No. 21 Sansome Street, San Francisco.

A. HAAS, Manager.

M. COOKE.

R. J. COOKE.

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit & Packing Boxes Made to Order,
AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOK & GREGORY

San Francisco Shopping.

MRS. M. B. SMITH will purchase and forward goods of every description at reasonable commission. For Circulars giving full information and unexceptionable references, address her, No. 200 Stockton St., San Francisco.

**MONEY ADVANCED ON
WHEAT**

In Warehouse at the Lowest Rates.

McAFEE BROTHERS,

No. 202 Sansome Street, San Francisco, Cal.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce.

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

60 Chromo and Perfumed Cards (no 3 alike), name in Gold and Jet, 10c. CLYTON BROS., Clintonville, Ct.

PLOWS! PLOWS!

Gang Plows, Sulky Plows, and Single Plows.

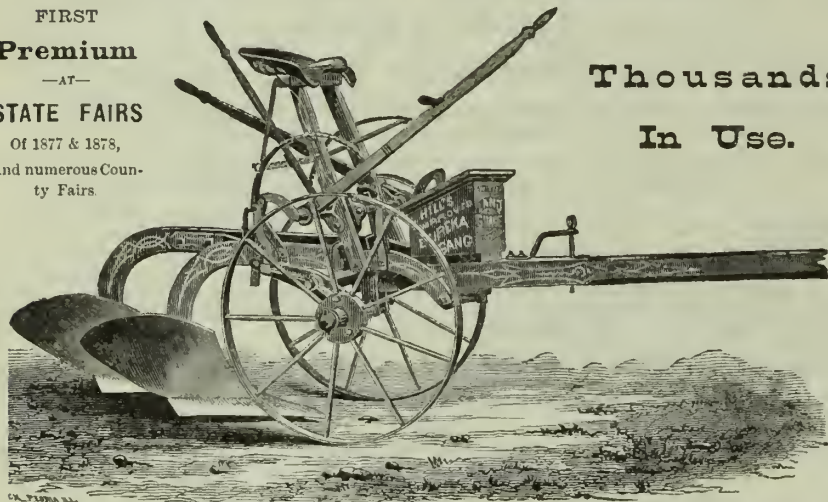
THE BEST IN THE MARKET!

Manufactured by the Sweepstake Plow Company, San Leandro, California.

THE OLD RELIABLE.

FIRST
Premium
—AT—
STATE FAIRS
Of 1877 & 1878,
And numerous County Fairs

Thousands
In Use.

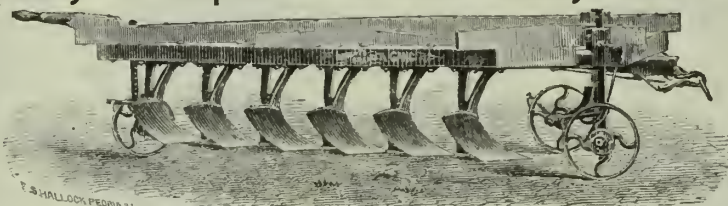


HILL'S CELEBRATED EUREKA, The Leading Gang of the United States.

The above Implement is undoubtedly the most popular and successful Gang Plow made in America. Its sales have probably been larger than of any other, and on the Pacific Coast have equalled if not exceeded the sales of all other Gangs combined.

It is made in a variety of styles, which we have not room to describe in this advertisement, but which is fully explained in a Circular that will be sent on application.

Simplicity, Cheapness and Durability Combined.



HILL'S IMPROVED GRANGER GANG FOR 1878.

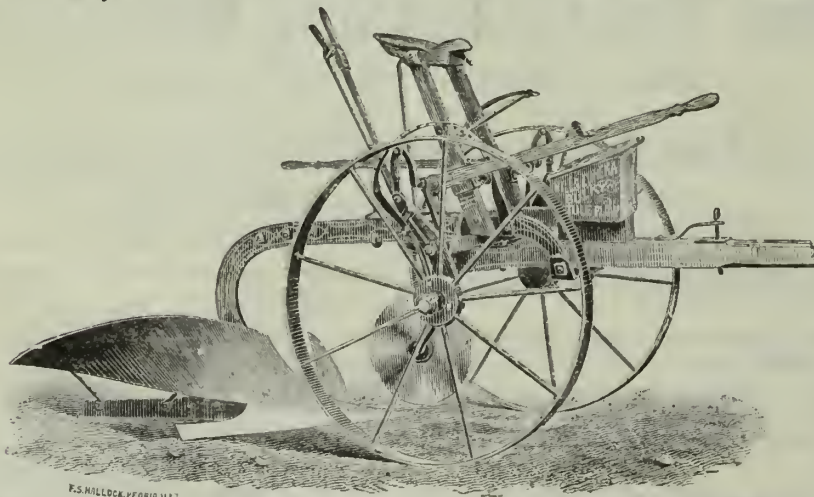
With from Three to Eight Plows.

The Cheapest Style of Gang Plow Made.

The above Gang is made in a style never before attempted in this State. The frames, which are clear, well-seasoned lumber, are put together in the strongest manner, and handsomely painted.

The bottoms are provided with our chemically hardened cast-steel molds, and will wear three times as long as the ordinary sheet-steel molds used by other makers.

The only Successful Tule or Sod Plow on the Coast.



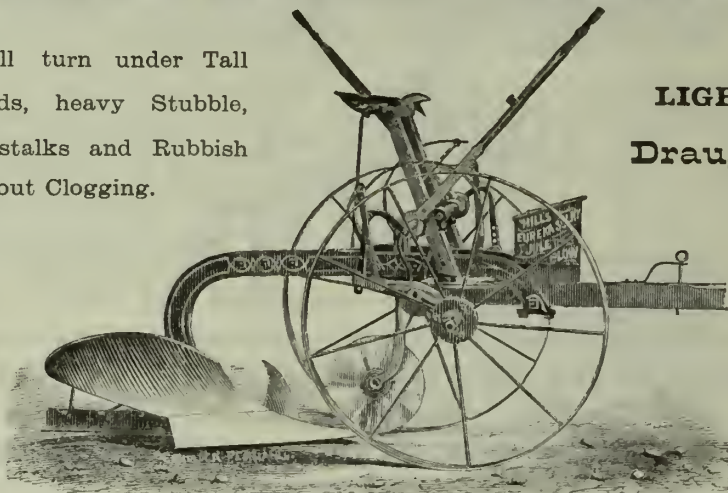
Hill's Improved Sod or Tule Sulky Plow,

Illustrated above, embodies all the points that skill and experience have proven necessary in such an implement. The wheels are very high, with wide tires, and are set wide apart, and the mold-board is nearly four feet long, and of such a form that the sod is compelled by it to turn completely over. The share is thin and sharp as a knife, and is provided with a fin coulter. A rolling coulter is also attached, but may be dispensed with, if necessary. HILL'S PATENT LAND GAUGE enables the operator to govern the width of the furrow to a nicety while the Plow is in motion, but it is not put on unless expressly ordered.

STRONG, COMPACT & DURABLE.

Will turn under Tall
Weeds, heavy Stubble,
Cornstalks and Rubbish
without Clogging.

LIGHT
Draught.

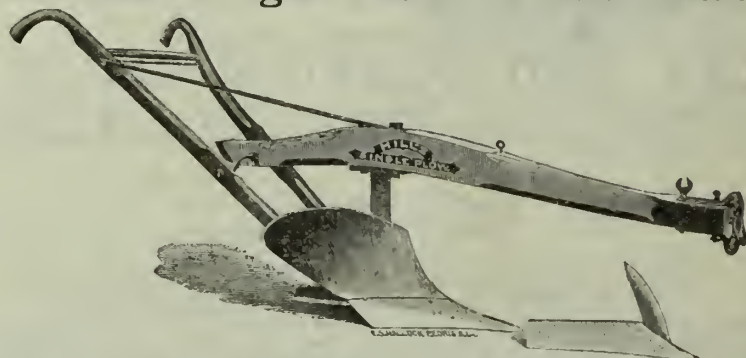


Hill's Eureka Single Sulky Deep Tiller.

This Deep Tiller is designed for heavy work, and is made very strong. It has high wheels and high beam, Fin Cutter and Rolling Swivel Coulter, and is specially adapted as a deep tiller for upland where there is tall weeds, heavy stubble and cornstalks. They are made from 10 to 24 inch cut. Also made with wheels of ordinary height.

Circulars with Full Particulars on Application.

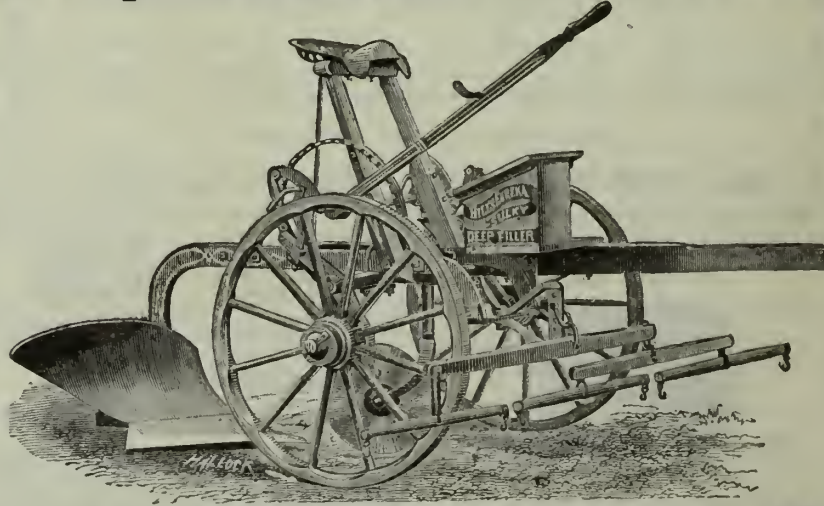
The Best Single Plow in the Market.



HILL'S IMPROVED SINGLE PLOW.

Workmanship A 1. Model perfect and beautiful. Beams longer than common. Landsides six inches longer than those of Eastern Plows. Molds 5-16ths iron center steel. Shares, cast-steel, all chemically hardened and nicely ground and polished.

An Implement that does First-class Work.



HILL'S IMPROVED SULKY PLOW.

It is undoubtedly true that the Single Sulky Plow is becoming more popular every year, both on the Pacific Coast and in the Eastern States, probably because of the excellence of the work done by it, and the ease with which it is operated. The Implement illustrated will be found satisfactory in all respects, being of ample strength in all its parts, and doing its work in the very best style. It is intended for three horses only—though the manufacturers make Single Sulky Plows adapted for four—and is made with bottoms cutting from 12 to 16 inches, as may be desired.

BAKER & HAMILTON, Agents, - - - San Francisco and Sacramento, Cal.



Volume XVI.]

SAN FRANCISCO, SATURDAY, NOVEMBER 30, 1878.

Number 22.

Pruning Vines in Portugal.

The forthcoming report of the 13th Industrial Exhibition of the Mechanics' Institute of San Francisco, will have especial agricultural value because of the report of the wine experts appointed by the Institute to judge and report upon such samples of wine as might be sent for exhibition. This report, so far as we can judge from such advance proofs as we have seen, will contain much information which will be of wide value to our vinegrowers. The report is written by Rev. Dr. J. I. Bleasdale, who brings to the task wide experience and observation in the chief wine districts of Southern Europe and the fruit of many researches into the scientific phases of the wine manufacture. We expect hereafter, when we shall have the full report, to allude to its main features. At this time we wish to present to our readers Dr. Bleasdale's description of the principle methods of pruning vines as practiced in those districts of Portugal which most resemble the vinegrowing regions of central California.

We shall take from the Institute report both text and illustration. Dr. Bleasdale writes as follows: From the seaboard at Lisbon, and Setubal to Coimbra, Colares, Torres Vedras, and round back by Palmella, the country and climate are not very different from a range of country embracing the whole of the valleys and hill slopes of Sonoma, Napa, the more elevated portions of the plain country about Stockton and Sacramento; the uplands of Stanislaus and Butte counties, and the genial climate of Mission San Jose; and as far as I have been able to discover, only one uniform system of pruning and cultivating prevails. I considered, when drawing this report, that vineyardists would probably find their account in pruning at least a portion of their vineyards to one or more of these methods. The natural habit of the vine must be considered. Pruned to long wands, some kinds will bear double the amount and of higher quality, than if spur pruned; and the reverse is the case with other kinds. The "Mission" seems to bear spur pruning very well. The Zinfandel, on the other hand, naturally

tends to long wand growth. As do the Hermitage, or Scyras, the Verdelho, Sweetwater and many others—in fact, all which have a climbing habit, *e. g.*, Muscatel of Alexandra, one called "Feral," and many more.

A primary purpose which I had in view, was to select only such examples of pruning as would secure the principal advantages of long pruning, or medium pruning, without incurring the heavy expense or wire trellises, or expalliers, and at the same time afford sufficient varieties to select from.

fruit while it ripens from the sun's heat, radiated from the smooth surface beneath and around them.

Figs. 6 and 7 show methods in pretty general use in the district of Bucellas.

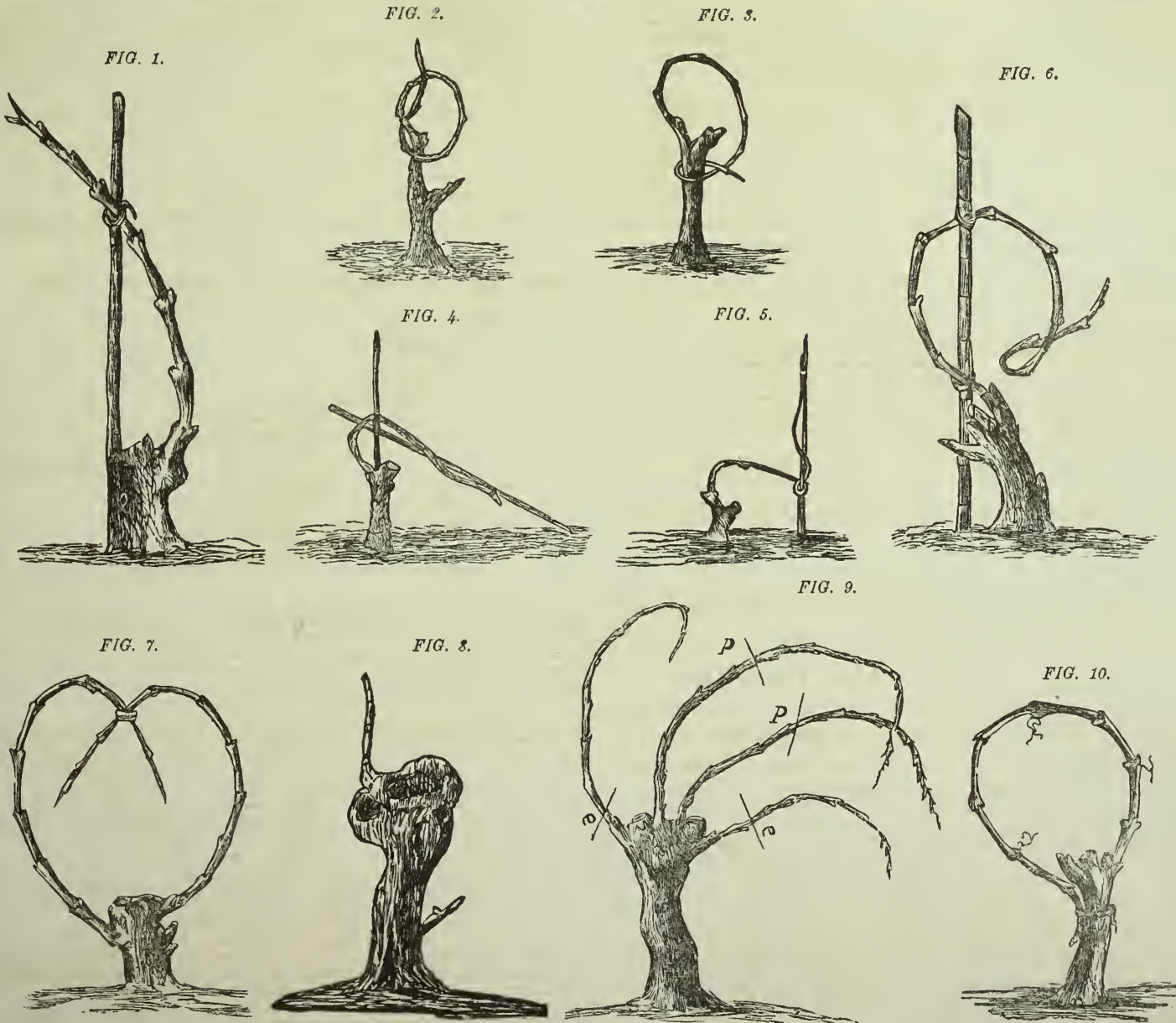
Fig. 8 is a method adopted with much success in renovating old and decrepit vines. The young shoot seen below is nursed till it grows strong, with only one pruned branch for fruit on the head of the stock. When the young one has become strong enough—in the second or third year—the decaying top is cut off just above

Fig. 10 is the plan usual in Carcavellos, near the seashore, a few miles from Lisbon, famous for the wine of that name.

We commend these different styles of vine pruning as described by Dr. Bleasdale to the attention of our readers. They certainly have the prestige of success abroad, and this may be surety enough to warrant experiment here.

Fungus-Proof Wheat.

Our wheat growers who have been on the lookout for a wheat which would withstand the ravages of destroying fungi, may learn from European experience that their efforts in procuring seed from new localities are in the right direction. The official and private agricultural societies of Austria and Hungary have been at work on the propagation and improvement of new varieties of grain, and experiments upon a large scale have been carried out, one of the principal points being to determine which varieties of wheat are least prone to blight, rust, or mildew. After a very careful and comprehensive trial, it has been found that new varieties of wheat are less subject to baneful influences than those older and more commonly cultivated sorts, and that even new varieties require to be obtained from a distance to gain the full benefit after a few years' growth. The three varieties which have stood the test most satisfactorily, and which are recommended by the



PRINCIPAL METHODS OF VINE PRUNING PRACTICED IN PORTUGAL.

Fig. 1 shows a method common in Alemejo. On vines pruned in this fashion, five or six eyes are left, the rest being cut out.

Figs. 2, 3, 4 and 5 are in general use in the central portion of the kingdom of Portugal, from Lisbon, on either side of the Tagus, over an area of 400 square miles, where the variety of vines grown appears to need this kind. Though the shape in which the fruit-bearing branch is bent or twisted differs in appearance, yet its length, number of eyes, and the position of the spur which is intended to grow the next year's wood, are all the same. Moreover, though those looped in the round seem to be vertical, they are found to be placed very often, as about Lisbon, horizontally. They shade the

it, in the pruning season, and protected by a bit of well-wrought tenacious clay, or other material capable of excluding water. It thenceforth becomes the fruit-bearing vine.

Fig. 9 shows the style used in the southern portion of the Alemejo, more especially in the old vineyards, where the soil is somewhat moist and rich. The crosslines at P P show the points of pruning for next season's fruit; those marked e e the *esperas* to grow wood for the year following. The formation of much of this part of Portugal is granite and schistose rock, with but little lime and iron. Here the musts are of low sugar strength. Still the district supplies itself, and in good years, a quantity for exportation.

various committees as most deserving of adoption, are the "Mainstay," "Urtoaba," and "Adeleide." The London Farmer says that the "Mainstay" is a wheat which has an established reputation as being very free from blight, strong in the straw, and prolific, while in quality it nearly resembles "Talavera." It was introduced to the public about four years since by Capt. Delf, Great Batley, Colchester; and it has now become popular in most parts of the world, as well as in Great Britain. Whether any of these varieties are now in the hands of our growers we do not know; we have never met with them. English wheats are being sent to this State for experimental purposes by the Commissioner of Agriculture at Washington.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Notes from Santa Cruz County.

EDITORS PRESS:—The city of Santa Cruz is justly celebrated as a watering place. The general healthfulness of the climate has made it a resort for the sick or careworn from all quarters. Boarding places for such are fitted up on the very summit of the mountains, many miles from the city. One of this kind, commanding as it does, a splendid view of the bay, ocean and much of the country intervening, and in charge of Mrs. Thos. Slaughter, a lady of refinement and intelligence, can be commended to any in search of a quiet home for a few months in the country.

The Glenwood Magnetic Springs, Near Vine hill, Mr. A. J. Haight, proprietor, possess the singular property of magnetizing iron, are also both mineral and medicinal, with a well on the grounds strongly impregnated with iron and sulphur, besides any amount of pure air and mountain scenery to make them attractive. Then there is the iron and magnesia spring of Mr. B. C. Nicholls, at Aptos, a sample from which he sends you, recommended for general debility, diseases of the liver, and many others the flesh is heir to, with a predominance of sulphate of magnesia, and a fair proportion of the sulphate of iron, soda and lime, making an admirable combination of cathartic and tonic properties.

The Dairies along the Coast.

"Roll on thou dark and deep blue ocean, roll."

Let any one take a drive along the coast road from Santa Cruz to Seaside, and watch wave after wave of the broad Pacific follow in quick succession, only to dash and break in foam against the shore, and he will find himself almost involuntarily repeating in slow, measured tones, that grand old stanza so descriptive of the scene before him. It will prove an excellent exercise for the lungs, as well as a safety-valve for the pent-up emotions. But other and different feelings come into play as dairy after dairy makes its appearance, reminding him that the great tides of immigration have reached these once far off shores, and a dense population are already jostling each other in the great struggle for existence, much as wave meets wave. Along this line may be seen not less than a dozen large dairies, devoted chiefly to butter and cheese, in some instances, having 200 cows or upwards, and, generally, all the requisite appointments for success.

Mr. H. Terry manufactures at the Baldwin & Wilder ranch, the favorite Baldwin brand of butter, so well known in the San Francisco market. Mr. E. S. West, of the Natural Bridge dairy—the nearest to Santa Cruz—gives his attention chiefly to supplying the city with milk. The cows here, some 50 in number, may be seen walking to their appointed places in the stalls, as so many well-drilled soldiers. Their necks being confined between upright stanchions, they are milked and fed at the same time. This done and released, out they march in like regular order. At this dairy the feed is all cut. About two tons are fed per week—so thoroughly saturated with water as to approach the liquid state—giving better results in milk than any kind of mere dry provender.

Pajaro Valley

Is one of the most fertile in this section. It is noted for the great variety of its productions, while many valleys of the State are confined chiefly to small grain, to one or more kinds at that. Here you find nearly all sorts, together with Indian corn, beans, beets, potatoes and the ordinary fruits and vegetables. Watsonville, favorably located on the north bank of the Pajaro river, which is the dividing line between Santa Cruz and Monterey counties, is in the very center of this fine valley, and quite a flourishing place. The soil about

The Willows,

Is a dark sandy loam, similar to that of its namesake near San Jose, and well adapted to fruits and vegetables. When the Corralitos Water Co. complete the irrigating ditch in contemplation, the land can be divided into smaller tracts for the purposes last named, and thus open up a field for a larger population. The woolly aphid has done some damage to the fruit trees here, and the scale louse has also made its appearance.

Corn, Beans,

And similar products require no irrigation. Finer corn than that found on the farm of Mr. L. Nugent and others could scarcely be seen on the best lands of the Mississippi. Mr. N. has measured as much as 10 tons from 3 acres, and looked for as large a yield the present season. Beans yield from 1,000 to 3,000 lbs. per acre, making a profitable crop.

The Coffee Bean

Was met with for the first in the vicinity of Watsonville. It brings 5 cents per pound by the wholesale. Mixed with coffee, 3 lbs. to 1 of coffee, it makes a very palatable and wholesome drink, being recommended in fact as a remedy for rheumatism, and a good, cheap substitute for coffee. Here is a chance for any one with an economical fit, to save, every year, the sub-

scription price of the RURAL, perhaps a great deal more.

The Irish Potato

Grows very luxuriantly in the valley—some varieties too large for economical table use. It has suffered considerably with the blight the past few years; yet the evil has been to some degree remedied by the introduction of seed that matures earlier. The "Brownell beauties," imported from the State of New York by Mr. J. B. Hudson, seem well deserving of the name. They are in color a very light red, some of the largest weighing as much as 3 lbs., but generally of a uniform medium size, and have entirely escaped the blight. He expects 150 cents to the acre, which is very considerably above the average yield. Another fact ought not to be overlooked, they can be eaten before full grown.

The Sugar Beet

Is at present one of the great crops about Watsonville, averaging 12 tons per acre, the best lands yielding from 20 to 25. It proves much richer here in saccharine matter than was anticipated from its large growth, and brings \$4.50 at the railroad depot. About 8 carloads are sent daily to Soquel, the present location of the works of the

California Beet Sugar Co.

They are the only company now operating, as we are informed, in the United States, and are working up into sugar 64 tons of beets per day. They expect to run through the present working season not less than 10,000 tons of beets, employ about 80 men and consume 5,000 cords of wood. Of this company Mr. A. Otto is Superintendent and E. Kleinau, Manager. We learn from them that the great drawback to the business hitherto has been in an inadequate supply of the raw material. As this difficulty no longer exists, they are somewhat sanguine for the future.

Sugar Making.

The mode can only be given in brief. The beets are first thoroughly washed by machinery and then ground to a pulp. The juice is separated from the pulp by means of a centrifugal machine, making 900 revolutions per minute. It is next brought to a boiling heat, to undergo treatment by means of lime and carbolic acid gas, followed by one of animal charcoal (bone-black), when it is evaporated for a final boiling in vacuum pans. Being now drawn off and the sugar allowed to crystallize, it is separated from the syrup by a similar powerful machine to that above described. To finish the process, it is dried, crushed by mill and barreled for market.

Facts Concerning Poultry.

Mr. B. DeHart, of Pajaro valley, commenced with 10 hens, common breed, February 1st, 1875. He has since realized from eggs and poultry sold, \$740 in the gross. His attention is now turned to some of the finer thorough-breds. His white and brown Leghorns are as beautiful as one could well wish to see. His young Plymouth Rocks, hatched only a month before from eggs imported from Allentown, N. Y., seemed thriving and happy in their new relations, without once a thought for "the old folks at home."

Chicken Rheumatism.

Coal oil is reported by Mrs. Mary Adams, as having worked wonders in the poultry yards of some of her neighbors, near Corralitos, causing the lame to walk, at least, if not to leap and cackle for joy. It is simply necessary to apply the oil to the affected limb, at the same time rubbing it well in, to produce the desired effect. The remedy is cheap and worth a trial.

A. C. K.

THE VINEYARD.

Phylloxera.

Meeting of the Viniculturists at Sonoma.

About a hundred of the viniculturists of Sonoma valley, met at Poppe's hall, Sonoma, on Saturday afternoon to listen to addresses on subjects pertaining to the interest and welfare of the leading product of the valley. Among those present we noticed Hon. Wm. McPherson Hill, Col. Geo. F. Hooper, L. Gosse, Dr. Leavenworth, Gen. M. G. Vallejo, A. T. Harashty, L. Jacobi, Geo. E. Watriss, J. A. Poppe, Julius Dressel and J. B. Morris.

The meeting was called to order by Senator Hill, who nominated Col. Hooper as Chairman, the question being put, he was elected unanimously. James B. Morris was elected Secretary.

Col. Hooper on taking the Chair stated that all were familiar with the object of the meeting, so he would introduce Prof. Hilgard of the State University.

Prof. Hilgard stated that he was pleased to meet the people of Sonoma, but he was prepared with no set speech; that they had come together to have a little neighborly talk upon subjects interesting to them all; that it was time that wine growers should take steps for self-preservation; as was evidenced by the melancholy piles of costly fire-wood seen about the wineries, and even in the public square. As Professor of Agriculture at the State University, he was anxious to bring the aid of science to the agricultural arts; and the same was true, of every other department of the University, each in its sphere. So long as farmers were backward in sending their sons for instruction, he thought it incumbent upon the institution to prove to them by other work the advantages to

be derived from a knowledge of principles and their practical application; for science is only the best results of past experience, systematized. Of such results as he had already been able to accomplish, he would only mention that of the examination of the alkali soils of the State, which had led at once to an easy and cheap mode of reclaiming a large portion of them, and the recognition of the exuberant supply of plant food they contained. But he has here as elsewhere found great difficulty in getting the cultivators of the soil to aid him in his researches, partly from a want of the habit of close observation so as to frequently omit to notice the very points most especially to be looked after; partly also, from a misapprehension of the intention, objects and possible results of such investigations. When in a position similar to his present one, in the Southern States, where cotton-growing was the paramount interest, the planter would say to him: "I raise one bale of cotton to the acre; can you, by the aid of science, raise two? If so, I am ready to listen to you. But the speaker said I may not be able to raise, even by the aid of science, two bales where you now raise one; but I can tell you how you can most cheaply continue to raise one bale always, instead of turning out your land to waste." They did listen when the shoe began to pinch, and a quarter of a bale was all they could get out of the impoverished soil; and they are now reaping the fruits of the work of science. And from what I see in your valley of the difference between the products of the vineyards now and when I was here three years ago, I think that the shoe is beginning to pinch here. Three years ago I found traces of phylloxera in numerous localities, and sounded the alarm; sounded too loud, perhaps, for I am pleased to learn that its ravages are not as extensive as I expected they would be; not extending as rapidly as in France; and as it does not spread so rapidly, I think something can be done to stop its devastations.

That something needs to be done if Sonoma is to continue to be a vinegrowing district, is by this time, I presume, apparent to all; it will not do to imitate the ostrich by closing our eyes to the facts of the case.

The way I account for the comparatively slow, though none the less sure progress of the pest in your valley, is that one of its many forms, that which has wings to carry it rapidly through long distance, is here produced, either not at all, or but very sparingly. That is my supposition; it is for you to aid me in verifying the theory, and this you can readily do by hanging out among the infested vines, in June, July and August, pieces of rag smeared with molasses, tar, or any other sticky substance, on which specimens of all the winged creatures in your vineyard will be caught. This is a question of primary importance in the premises; but in order that you may appreciate its bearing, I must tell you something of the life-history of this interesting little insect.

The phylloxera is an American insect—a present from America to Europe, and appears in two forms; the first forms galls on leaves, and is met with in all parts of the country on the leaves of wild vines; the second seeks the roots and is the only dangerous one. Both kinds are of a waxen yellow tint, but otherwise look like the common plant louse or aphid, only they are very much smaller, hardly the size of a very small pin head. As ordinarily found sucking the rootlets of vines, the insect is wingless, and all are females, or at least, egg-layers; for there are no males for three or four generations, during which each of the insects may lay from 200 to 400 eggs apiece, which hatch in about 10 days. So you can easily understand why and how the vine-roots are so rapidly re-peopled after having appeared completely deserted during the winter. About in the fourth generation a winged form makes its appearance, whose wings are so large in proportion to their bodies, that they have little control over them; but when they rise in the air, they are carried wherever the wind may chance to take them. These lay only three or four eggs each, which produce two kinds of phylloxera, large and small, the former being females, and the latter males. This generation has no digestive organs, being destined exclusively for reproduction; the female lays but one solitary egg, which is especially tenacious of life, being destined to hibernate. From this egg is hatched, on the return of spring, the ordinary root-louse, whose vigor is thus annually renewed. You see it is the winged form that renders possible the rapid spread we have seen elsewhere; also, that its destruction would seemingly put an end to the propagation of the species. But nature has provided against this contingency; for in time of need some of the common egg-layers undertake to lay the large solitary egg which hibernates, and moreover, in a mild climate, some of the millions of common eggs, and a few egg-layers, also survive. These eggs can be destroyed by from 28 to 40 days' submergence; which can only be done in winter without injury to the vines. This, so far, is the only absolute remedy found, except in very sandy soils. The phylloxera cannot live in sandy soil, because it is too weak to crawl from one place to another, the grains of sand obstructing its progress; in adobe soils it crawls along the cracks. When a vine is properly fed, and in soils containing considerable quantities of potash, the vines can live and support a considerable number of the insects. They leave weak vines and attack strong ones, and vines attacked and weakened by them, often live after they leave them, and I think many vines can be saved that have suffered by their ravages. This is possible by circumscribing the vines with

some substance that is poisonous to the phylloxera. Among thousands of such that have been tried, bi-sulphid of carbon has proved the most effectual and available; but when applied directly it injures the roots, disappears too rapidly and costs too much. It has done better in chemical combinations from which it is slowly set free; but here is something seemingly better and cheaper:

The Professor here exhibited some "phylloxera bricks," he had just received from France, and which had been used with advantage in the districts afflicted with the insect; they are cheap, costing but the fifth part of a cent apiece, and will retain their virtues a long time. They are made of clay, placed under the receiver of an air pump, and when the air is exhausted, bi-sulphide of carbon substituted, and the whole covered with an impervious coat of glue. The combination is thus formed mechanically, and the odor is so pungent that one brick placed incidentally in the Professor's study, caused all that entered to remark its presence. They are to be placed in the ground near the infected plants, three to each.

There was much good testimony to show the efficacy of this mode of application, and he thought a quantity should be imported at once for trial. Then if we find it effectual, we can make the bricks here, and thus circumscribe the evil and save the old vineyards.

But as to the vineyards of the future, he thought it necessary that they should be secured against this danger from the outset. This is now being extensively done in France, by grafting the grape-varieties liable to the phylloxera, upon such stocks as, being liable to the attack of the leaf-inhabiting form only, were safe at the root. The grafting must be done far enough above ground to prevent the graft from eating roots of its own. The Professor here explained some of the best modes of grafting vines, and exhibited tables showing what stocks might be used to the best advantage.

The cultivated American grapes are derived from three wild species: namely, the fox grape of the Atlantic border, the summer grape of the Middle and Southern States, and the frost grape of the West and South. The cultivated varieties derived from the former are generally liable to the attacks of the root louse, but most of those derived from the frost grape are exempt from it. By grafting the former, or the European grape (which includes the Mission), upon the latter, we can still raise the same varieties as now and be safe; or else, we can plant the varieties derived from the frost grape, pure and simple, producing, of course, wines different from those we now make.

As to the expense of getting the stocks, I incline to think it may be obviated by resorting to the native Californian grape—not the Mission, but the wild vine. I find that the latter resembles exceedingly the frost grape of the East, and I therefore think it must be exempt from the attack of the root-phylloxera. You can test this idea very quickly, and I hope you will do so. Strike the cuttings of the wild vine right among some of your infested European vines, and in a few months you will know just what can be done with it. It seems to root very easily, and it will be a great gain if it should prove available.

The Professor closed his remarks by stating that he would say nothing about the subject of wine-making, as Rev. Mr. Bleasdale was to follow him, but would say just this much, that having lately had the opportunity of examining systematically a large number of native wines, he was pleased to be able to say that he had found many excellent ones, greatly superior to what he used to think the State could produce. Evidently much progress had been made in the handling of wines, and in replacing the sweet and tasteless Mission grape by better varieties. One point seemed to him to deserve especial attention by way of contrast to the European practice of giving the grapes all the sun possible. In the ceaseless sunshine of California, this has the effect of rendering all its wines very strong and heady, which is an objection to their everyday use. Suppose we try to remedy this by not allowing the berries to get quite so dead ripe, leaving them more acid with less sugar, so they will be more nearly like Zinfandel grape, which yields our best red wines. This and many other points deserve close study, wherein the University will render all possible assistance.

The Professor's remarks were well received, and he was warmly applauded.

Col. Hooper then introduced Rev. J. J. Bleasdale, D. D.

The Father prefaced his remarks by stating that he was a Roman Catholic priest, educated in England, but spent the first portion of his life as a minister in Portugal, and while there had paid a great deal of attention to the manufacture of wine, which was one of the staple products of that kingdom, that his health failing him, he had been obliged to seek another climate, and went to Australia, and while there he had found occasion to use the knowledge that he had gained in Portugal in the development of the wine interests about Melbourne, and that consequently, now that he was on a vacation, his mind naturally ran in the interests of viniculturists. He had examined a large number of the wines produced in this State, having, in company with others, put them to every test, and while he had found some things to condemn, he had found much to commend. Many of the wines of this State, and some of Sonoma valley, were as excellent an article as was produced in Europe. In testing, they had mixed European and American productions indiscriminately,

and while testing did not know what wine they were examining, and when they had completed their labors they were gratified at the result. He spoke against the attempts some made to make smooth-tasting wines by the excessive use of isinglass and other substances, and said that such abortive attempts to "age" wine was deleterious; that with time California wines would rank as high in the market as those of Europe. He thought that co-operation among wine growers to introduce their wines as California wines would be productive of much good, and outlined a plan by which this object might be consummated. He spoke at length on the Portuguese methods in the manufacture of port wine, and of the methods that the English and other nations had of imitating it, and concluded his remarks by testing two glasses of wine, one a so-called imported variety, and the other a pure wine from Sonoma, and showed the difference in the color of the two when acid was applied.

At the close of the remarks, Nicholas Cariger moved that a vote of thanks be extended to the speakers for their kindness in addressing them on the subjects so interesting to all present. The motion was carried unanimously, and the meeting then adjourned.

[Some points in the above report are taken from the account of the meeting by the Sonoma Democrat, but it is in the main taken directly from Prof. Hilgard's notes.—EDS. PRESS.]

HORTICULTURE.

The Salmon Berry.

EDITORS PRESS:—As the question of the salmon berry is being pretty freely discussed in the PRESS, it may not be out of place to give a few facts in relation to it, and may possibly save much time and useless expense. Mr. Mavity is right in some of his statements, as Dr. Newmark says, and would no doubt be right in all had he seen them in their native home, and observed their habits with a view of bringing them out.

The salmon berry grows in its native state from central California to well up in British Columbia, and the forests of Oregon, Washington Territory and British Columbia are its home, but it flourishes best in the two latter places. Mr. Mavity is mistaken in his statement as to its incroachments in the forests, as far as I have observed it extends for hundreds of miles (instead of yards) into the dense forests of those northern latitudes and seems to thrive best and fruit best under the protection of dense shade, but rarely incroaches over a few hundred yards on open plains, and I have never seen a plant fruit on an open plain. The fruit can never have any commercial value, as it is a very shy bearer and very perishable, and will not stand transportation, as Dr. Newmark observes; and as he says, they are best when eaten off the bush. In that state, eaten with cream and sugar, I consider them delicious, as they are very juicy and of a fine musky and raspberry flavor. They do not resemble the blackberry nor strawberry in any particular, but very much resembles the raspberry in both and are certainly closely related to it; but as to that I cannot say, as I am not a botanist. They have the perfect habits of the latter, they grow on a large pod and when ripe peel off like the raspberry, but with a very large hollow, making it look more like a German smoking cap than anything I can think of. Thus there is formed but a mere shell of fruit, and for culinary purposes, as Mr. Mavity says, is useless; as after stewing for a few moments there seems to be nothing but a little juice and a great deal of seed. Those who think they can be improved by cultivation can try them, I have no time to spare when there appears to be so small a chance for success. I tried it in 1858, as in that year I brought down a number of the plants from British Columbia and tried them in several localities, and under different circumstances, and found that they thrived best under the shade of trees and in deep leaf loam.

Another Native Fruit.

While on the subject of our wild native fruits, I may mention one that without doubt would be of great value if introduced and cultivated; providing they would succeed in our dry, hot climate. I don't know to what class of berries it belongs, but it resembles our common red currants in size and general appearance, but of a bright scarlet color. It has small seed like the currant, but differs in its habits, as it does not grow in clusters, but singly, with a berry above each leaf; the leaf being very small and of a whitish-green color. The bush grows from 18 inches to 3 feet high, of a beautiful clean appearance. The stalks until two or three years old is of a greenish color, almost square, with a knife-like burr on each corner, but no thorns. It is the handsomest berry bush I ever saw, and a prolific bearer; in fact, so laden with fruit that they cannot sustain their weight but droop over on the ground, and seen through the woods resembles a red blauket more than anything else. They are fine keepers for soft fruit and will stand transportation well; and the taste is one of the best tarts I ever saw. I think it superior to the cranberry. This is a fruit I think worthy a patient trial. They

grow and thrive well in the open forests in Washington Territory and British Columbia. I brought down a number of the plants and seeds from the latter place, in 1858, but had the misfortune of losing them by the wet winter of 1861 and 1862, having planted them in a low place where they were drowned out. I hope to see the experiment made by some one else with better success. WM. H. JESSUP.

Haywards, Alameda Co., Nov. 20th, 1878.

[We can say on behalf of Mr. Mavity, without his authority, that he has lived at the north, as we have heard him describe his life in Del Norte county. Whether he has studied the berry farther north we do not know. What do our readers know of the other fruit described by Mr. Jessup.—EDS. PRESS.]

The Salmon Berry in Mendocino County.

EDITORS PRESS:—I noticed an article from Mr. Mavity, concerning the salmon berry, in the PRESS of November 9th, and I thought him so near right that I would say nothing on the subject; but Mr. Washburn takes it up and disputes him on some points, and says they can be put up in as good shape as the blackberry. In reply I will say the salmon berry at Ferndale and Bear Ridge must be different from the salmon berry in Mendocino county, if they can use them in that way. They are considered here unfit for use except in the way described by Mr. Mavity. I have seen them grow out a little distance in the prairie, but never knew them to bear fruit except in low, shady places. I dispute one point with Mr. Mavity, that is the color. I never saw a purple salmon berry, and I have lived on the coast for 10 years. In this county the berry is bright yellow, and almost a blood red; these two varieties are all that grow here. If Mr. Washburn can put them up in as good shape as the blackberry, I think he will not undertake to prove they are as good when put up as the blackberry. If he does, his salmon berries are better than any I ever saw. ROBERT CAUGHEY.

Point Arena, Mendocino Co., Cal.

Still Another Testimonial.

EDITORS PRESS:—Our worthy correspondent, John Mavity, of St. Helena, Cal., in his letter on the salmon berry, has "struck the nail square on the head." I tried, without success, to domesticate the salmon berry 16 years ago. C. Talbot, of Bennett valley, also failed to make the plants do anything. I never saw the salmon berry further south than the mouth of the Russian river. They may be cultivated to profit in their own peculiar soil and climate, but I have my doubts even of that. I regard the salmon berry like unto "Poor Lo"—when ever the hand of culture takes hold of him, he begins to wither. G. K. MILLER.

Los Nietos, Cal., Nov. 16th, 1878.

Points in Favor of the Salmon Berry.

EDITORS PRESS:—I would like to say a few words in favor of the salmon berry. Mr. Mavity has given a fair description of the fruit, as far as it goes, but of its habits, I think he made a great mistake, as it will not grow in thick heavy timber at all, and its fruit is much the best where it has the full rays of the sun, but shading the ground with its own growth, being protected by timber from the cold north and ocean winds. Thus protected, I have seen it 20 or 25 feet in height or length in our rich bottom lands here on Eel river, but it grows much shorter out in the open ground where it is choked by the grasses and ferns. You must not, from what I have said of its length, think it a vine; it is a bush.

The reason Mr. Mavity did not see it growing more in the open ground, was probably because the Indians burn all such ground over every year to catch the rabbit. That was the custom with them here in an early day. The bush will not stand fire.

I think the fruit will improve by cultivation like all other fruit, and I am glad there is a prospect of its having a fair trial, as Messrs. Reynolds & Washburn have commenced propagation and cultivation from the seeds. It is surprising to me that it has not been done before now. It can be propagated from the roots by cuttings, the same as the blackberry or similar to the hop vine.

And now for its good qualities. It is good to eat fresh from the bush with cream and a little sugar, as Mr. Mavity says. It is even good with sugar without the cream. It makes a beautiful jelly. It is preferred by many to the strawberry for making pies. It makes an excellent wine, which many prefer to either the blackberry or currant, as it does not require nearly as much sugar as either of them, and has an excellent and true wine flavor. Above all it is good to have for the health of the people, coming, as it does, before any and all other berries, as it commences to ripen here in Humboldt in March, and, as a matter of course, in a warmer climate will ripen earlier. I have been in this county over 20 years.

JOB TOWER.

Ferndale, Humboldt county, Cal., Nov. 13th.

INTROSPECTION.—A chemist of Prague is said to have invented a form of mirror by the assistance of which the interior of wine or other casks can be thoroughly inspected without the necessity of removing their heads.

THE STABLE.

Breeding Horses in California.—No. 9.

[Written for the PRESS, by Joseph Cairn Simpson.]

Good treatment, liberal feeding, every care which will advance the health, robust condition, and strength of the animals, is the groundwork of success in breeding horses which will have active duties to perform. The lack of these for a month, for a week even, may change what would have been a paragon into a wreck which will never pay for the services of the stallion. Those who have thoroughbred stallions in charge now-a-days have generally knowledge enough to give them suitable exercise, and they are either ridden or turned into a paddock, where they can regulate their own work. As a rule thoroughbred mares, when put to breeding, are "turned out," and never have a halter put on them unless for the "trials," or to lead them into the boxes where they are to be sheltered. On the large breeding farms this is the universal plan, and among small breeders there is a mistaken idea that this is the only method to follow. Where their work could be made available, there is no question but that the light and moderate work of the farm and road would be beneficial. The trouble is that so few have been broken to harness, that when the training for races is ended their only education has been how to carry a weight on their back, and the owners are loth to undertake the task of making them serviceable in other respects. With proper care, the task is not a difficult one, and will well repay the trouble.

The impression prevails that the thoroughbred horse is not fitted for ordinary harness purposes; that owing to high temper they are dangerous to drive. An erroneous idea. The horse which I use almost daily on the road is thoroughbred, and quite fractious when engaged in races; in harness he is the safest horse imaginable. He is without fear, and will pass objects which would frighten a "lunghill" out of his senses. A lady drove Thad Stevens before he ran his celebrated races, and a majority of blood horses which I have known to be used in harness have been reliable. The great thing is to be careful in breaking them, and to take every precaution to accustom them to the harness duties without provoking resistance. Kindness will effect more than coercion, and when the animal learns that the new situation is not to be feared the trouble is ended.

Supposing that the mare is unbroken to harness, and has just finished her racing career, I would recommend breaking her before she was bred. To effect this get her thoroughly accustomed to the harness, and as she has been accustomed to blankets, and answers to the bit, the crupper is the only thing that will be new to her. After she has been driven for some time with the harness on, hitch her by the side of a steady companion, and one she has become acquainted with. In all probability she may be a little startled when she finds the vehicle following her, but her mate will give her confidence, and in nine cases in ten, with due precaution, there will be no difficulty, and after a short time she can be used in light work. The advantages of having her broken so that she can pay for her keep is not the only thing gained. It insures better care and the regular feeding, which is so essential to the well-doing of her offspring. After she has been served by the horse she should be kept quiet, though there need not be any cessation of work. Do not return her to the horse until eighteen days have elapsed, and, if not in season, return her in nine days from the last trial. In nine days more, if she still refuses, the chances are favorable for her being in foal. In such a favorable climate as there is in California, the foals may come as early in the year as is desired, but there must be no risk taken of the foal being dropped before the first of January. Mares usually go a few days over eleven months, but as there are instances of colts being dropped in a shorter time, it is better to have them come a few weeks later than to take any chances.

With a young mare which has never been bred, I would prefer to wait until the middle of April before sending her to the horse. The most certain time for a mare to conceive is from the eighth to the twelfth day after foaling, and this will bring the foal a little earlier each year. Then sunshine is of great importance to the young foal; and as the first colts are not so liable to be strong as the after progeny, the sunshine is of greater importance than hereafter. The mare which is expected to rear a first-class race-horse should be fed as regularly, while she is in foal, as though she were in training; and if she is in daily use that is more likely to be done than when running in the field.

We will consider the treatment of the mare which is worked first, and after that those which run out. The work must not be such as would entail a severe strain, and to pull a load which would require all her strength might result disastrously. There will be less danger in moderately rapid driving on the road until well advanced in pregnancy, and careful driving can be persisted in until within four weeks of the time of foaling.

Five months, and a little beyond that period after conception, is a critical time. Then there is usually a slight swelling of the milk veins, and a trifling enlargement of the mammary

organ. This is a sure indication of being with foal, and the young mare should be kept quiet, and given a smaller amount of grain until the swelling subsides. It is a good plan to give some "cooling" food then, and there is nothing better for her than to pick green grass for a couple of hours each day, but as that is a scarce article in California in July, August or September, green corn blades will take the place of it. If neither can be obtained, mashes made by pouring boiling water on oats and bran mixed in equal proportions, with a handful of salt in each feed can be given once a day. The mash must stand until it is entirely cool, and any of these things which people are prone to advise like antimony, fenugreek, etc., should not be incorporated in it. When ten months have expired from the time of service, the mare should be thrown out of work and turned out, when the weather is fine during the day, in a small lot by herself, or with some quiet mare she has been accustomed to. The midday feed may be given in the lot, and a little less grain allowed than when at work. At night she must be housed in a roomy box-stall, with plenty of bedding and all the hay she will eat. She cannot have water too frequently, and must have it often enough so that she will not need more than an ordinary bucket full to quench her thirst. She will require from this time the closest attention. The udder may become full and tense several days before foaling, but when there is a waxy exudation on the end of the teats, the crisis is near at hand. When that indication appears she must be watched night and day. This surveillance, however, must be done quietly, and care taken that she is not disturbed when at rest or asleep. It is sufficient to have an opening in the stall from which she can be observed, and better not to go into the stall until it becomes necessary. When parturition is coming on, and the pains overtake her, do not interfere with her, or show that she is observed.

In nine cases in ten, or even a greater majority, mares which have been kept in the manner described will foal without assistance, and in a few minutes after the water breaks, will be relieved of the burden. Should difficulty arise from mal-presentation of the foal, it must be turned. The proper presentation is for the foal to come with the head between the fore legs, which appear first, and sometimes with this there may be difficulty in the birth. In that case do not be in too much of a hurry to assist, as the efforts of the mare may be sufficient, and pulling at the colt oftentimes causes resistance. The proper plan is to take hold of the legs quietly, and when the mare makes her effort, pull steadily, stopping as soon as the animal gives up straining. In cases of wrong presentation the foal must be pushed back and turned, but this requires a practiced hand, and the owner should, if possible, obtain the aid of a competent person.

Sometimes the "sack" or covering of the foal does not break, and from exhaustion or other causes the mare does not get up soon enough to tear it off, and some young mares have not the instinct to relieve the foal of the incumbrance. This sheet is connected with the foal by the umbilical cord (navel string) which the mother bites off. If it has to be removed by hand, a string must be tied round the cord within an inch of the body, and the umbilical cord cut. If everything progresses favorably, it is best to let the mare alone. She will lick the foal until it is nearly dry, and if the young thing is strong it will be up and endeavoring to suck very soon after it is ushered into the world. At this time a little well-directed aid is often of great service. Young mares may be touchy, and not disposed to let the foal suck, requiring to be held, and some have so much anxiety for their offspring, that they keep turning around to follow the foal in its movements. I have omitted to state that when the mare is turned out her shoes must be pulled off and the edges of the hoofs rounded. This is necessary to keep them from injuring the foal by stepping on it, and the danger is much lessened by the feet being bare.

It is oftentimes a good deal of trouble to teach the foal to suck, and a fund of patience required. There may be such a flow of milk that the teats are so full that the foal cannot get hold of them, and a stream will run voluntarily into its face. Unless the colt is so weak that it cannot be held up to suck or will not take hold of the teat, it should not be fed. Usually, a few minutes are all that is required, and after it has acquired the knack, and imbibed a full meal of the life-giving fluid, the first trouble is overcome, then you can safely leave the mare and colt after having arranged the bedding, and given the dam a bucketful of tepid oatmeal gruel.

Should the birth take place in the daytime, when the weather is fair, by all means leave the mare in the small field by herself. This field or paddock should be free from holes or water, as very frequently mares have a penchant for selecting some place where they are sure to get in trouble. With the mare which has been running out the whole of the time, the only difference in the treatment is to have conveniences for feeding in the field. The best plan is to turn not more than two mares in the same lot together, and if there is the least inclination to quarrel, only one, with a shed which they can run under at will, but which in stormy weather can be closed. The adjuncts of a breeding farm, however, will be fully considered hereafter, and having ushered the future race-horse into the world, in the next paper I will show how he must be treated hereafter to get the full benefit of his birth and breeding.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Thoughts for the Grange Anniversary.

Another year of the history of the Order of Patrons of Husbandry is rapidly drawing to a close, and the annual meetings of the subordinate Granges are at hand. It is fitting that an extra effort be made by all strong-hearted Patrons to draw out a full attendance at these meetings and enlist all who have been inconsistent in their Grange work to take a new hold and go forward. At the annual meetings it will be proper to have the whole history and progress of the Grange hitherto carefully reviewed, and lessons drawn from past experience laid down for future guidance. The Master of the State Grange of Missouri, Brother H. Eshbaugh, has just issued an address appropriate to the coming of the anniversary, from which we shall take extracts of stirring interest, and points of practical advice. He says:

Patrons, do you realize that we are approaching the close of another year in the history of the Patrons of Husbandry, which is a period in the existence of our organization of great importance, as it is the time of general settlement of comparing notes, striking balances, invoicing the loss and gain of the past year, so that we may know the true status of our Order, and when this invoice is made, the balances struck, and the comparisons and settlements completed, then we know our loss or gain, we know our strength within ourselves, we know our standing, our ability to do the work before us. Hence it is important, that at the close of the year, our standing be properly estimated, and our real strength fully understood. We will then be the better prepared to lay out the work for the ensuing year, and how to work with a united effort to accomplish the great object for which we are organized, and have now become a power in the land. The objects that underlie the great fundamental principles of the organization of the Patrons of Husbandry, are founded upon justice and equity, they are moral and elevating, and in harmony with the teachings and the laws of Heaven. And no power on earth can prevent its final triumph, except the neglect of the farmers themselves. And the greatest hindering cause to success today is the inactivity of the farmers in looking after their own interests and the welfare of their own organization, the only organization that was ever presented to the farmer as strictly a farmers' organization, and it is the only organization that ever can or will elevate us as a class, and place us in a higher scale of manhood and womanhood, and save us from the thralldom and bondage that is gathering with rapidity and power to engulf the agricultural interest of the whole country. And the only hope to stay the tide and prevent the sweeping of the agricultural classes and interests into the vortex of ruin lies in the success of the Grange work; and just in proportion as you labor in your own organization, "the Grange," with a united effort to make the Order a success, just in that proportion do you hold in check the onslaught that is made upon you and your interest. And if the farmers of the country will unite their efforts, their intellect, strength and power in their own organization, and build it up on its fundamental principles of justice and equity, equal rights to all classes and interests, it will be triumphantly successful with sufficient power to crush the combined strength of monopolized tyranny.

Now, as we are preparing the balance sheet at the close of the year, let us be careful and act wisely, risking no hopes upon doubts, but only on realities. Wherever we have lost, however small it may be, let that loss be charged to the debtor side, as well as to enter the gains on the credit side, then our balance will show the facts as they exist, and we will all fully understand the true status of the Order, and will be the better enabled to work effectively for its future advancement and prosperity. Let there be a proper effort to make the closing of 1878 the brightest of any year of our existence. Patrons, it can be done, but you must all give a helping hand in the work. Suppose each working member in the State should devote a few days now to the interest, and for the success of the subordinate Grange in which they hold a membership, look after the backslidden and the lukewarm members, and get them interested in the Grange meetings; look after your dropped and suspended members, get them to return and become reinstated; induce delinquent members to pay their dues to the subordinate Grange, and keep in good standing. See to it personally that the election in your Grange is properly held, and that good active members are elected to all the offices, and that the dues to the State Grange are paid, and what a bright figure the credit side of the balance sheet would show at the close of the year. It can all be done, if you will but make the effort. Why, many of you have spent more time electioneering for a friend, to secure the election of constable, justice of the peace, or some other petty office, very insignificant, when compared with the success of the Grange. Can you not now do as much

for your subordinate Grange? When you do this you do it for yourself, your family and for the welfare of the whole country, instead of a friend only. Suppose you make the effort, and you will yourself be surprised at the result and will have the satisfaction of having accomplished a great good, both for the present and future.

GRANGE ANNIVERSARY. — Contra Costa Gazette: The members and their visitors celebrated the fourth anniversary of the Walnut Creek Grange in a very pleasant and profitable way last Saturday, with discussion of questions pertaining to the business and social interests of the Order, and a bountiful feast of appetizing substantial and delicacies that are nowhere more liberally provided or cheerfully enjoyed than in the Grange.

Golden Eggs.

[Written for the Press by C. L. ANDERSON, M. D.]

Every honest endeavor to gain a home and a competence should be encouraged. Our laws and their administration should shield and favor all such efforts, because every home added to our country becomes a fort of defense; a cement to bind the national structure; a tie of patriotism; a resource of wealth; a focus of contentment, and a strong link in the perpetuity of our best institutions.

Discourage home-building, place it beyond the reach of the young and vigorous, and so much as we do this we weaken our national fabric. We encourage tramps, emigration and disloyalty. Every home, and every effort towards making a home, fairly and sincerely, should be as free as possible from burdensome taxes. Our national, State, county and municipal interests demand this, for the good of our "body politic" depends on healthful, happy and contented homes. Our social and political corporosity—the great bulk of it—is made up of "poor, but honest" people, striving to build around them a house and its appurtenances. They are home-builders. They are the "bone and sinew," and we may add, the brain of our land.

But what are the facts? Do our law makers take them by the hand (except when candidates for office) and encourage them? Do our assessors and tax-collectors smile on them, forgetting to make an account of every little improvement about their houses, the number of chickens they own, and the carts and reapers and hay rakes? Are the tools of the mechanic, the books of the professional man, the shelves of the merchant, the dray of the humblest drayman exempt from an unreasonable tax?

Let us look around us and see. Here is a man with young and growing family, peaceful, industrious, temperate, striving for a home and a competency. He buys a bit of land in the suburbs of our city. He builds a little house and now he must seek to earn a living. He manages to get a wagon, harness, and a span of horses. On the wagon are the words, "Job Wagon." But before he can make himself useful, or avail himself of patronage, he must take out a license and pay from \$10 to \$25 a year for the privilege of using his wagon and horses to earn a living! (I use here an exclamation point, not because such a thing is uncommon, for nearly every town and city does this, but because we, as a people, submit quietly to such an imposition). And then come the tax assessors, one, two, three, and list his little property at its full value, wagon, harness, horses, etc. He may owe Mr. Blank, who holds a mortgage, but that is not deducted from his estate—his property value. Thus he has a general tax, a license tax, a poll tax, a road tax, a municipal tax, a special school tax, a dog tax—all compulsory taxes that he must pay—quite a sum in the aggregate for a poor man, a workingman, trying honestly to build up and establish a home. But government must and should be supported, and taxes are inevitable, and mortgages are inevitable and inexorable, and death is inevitable, and the taxgatherer we always have with us. But there are some things that should not be inevitable. There are feathers that break the camel's back, and there are taxes that tend to make "tramps" of us all.

But suppose our man, the would-be-home-builder, concludes to engage in trade—some honest and useful branch—a book store for instance. He is subjected to a similar unreasonable routine of taxation. A "Trader's License" must be procured, and a municipal license, and the stock in trade is taxed over and over again; these with the many incidental expenses too numerous to mention render the trade, even without much competition, very unprofitable. So that a home can hardly be built up in that way.

No wonder then that labor and trade are crippled, that homes are broken up, that stock speculations are engaged in; that our country is overrun with restless, dissipated people, who might, under other circumstances, be useful and industrious citizens.

Over the way is another man, Mr. Blank. He is the owner of many ranches. He holds mortgages and has accumulated much property. He is rich; but I need not suppose he came by his wealth unfairly. He possibly has been industrious, economical, honest. By a "tight squeeze" he might get into the "kingdom of heaven." He has made his fortune—is worth half a million dollars more or less. He engages in no more enterprises. His capital is secured

as well as earthly goods can be secured—even from the eyes of the assessor, and the fingers of the taxgatherer. Moreover, it is a notorious and shameful fact, that he pays in proportion to his estate one-half less than Mr. Home Builder.

Travel as we may through some of the finest and richest valleys of our State, and sometimes as far as the eye can see, one man owns all the land. There is room for thousands of homes, yet one man, or a few men, hold it all; neither do they live or have a home on it, or will allow any one else to do so. And the tax is only a few cents per acre, so the owners can afford to hold it as pasturage for a few beasts and a rise in value.

I have no envious or bitter feelings against men of wealth. But as a people, rich and poor, we are pursuing a mistaken policy; a policy that never will increase the value of the rich man's land or add to the happiness of our people. It is right to tax property in proportion to its value, and to make taxation equal and uniform throughout the State. Our Constitution guarantees this. But when it comes to double taxation and no taxation of property—when industry, enterprise and improvement are taxed to eke out the no-tax of mortgages and uncultivated lands, we are placing a hindrance in the way of home-building that must be disastrous to all.

We are killing our geese that lay golden eggs. We are not taxing property, but we are taxing that which would make property. For the most part, it is not property our law-makers tax. It is the enterprise, the energy, the industry, the life and happiness of our people that pay the main burdens of government.

The person who lives idly on the accumulations of wealth pays proportionately but a small part of the required taxes. This is not right; it is not equal taxation. The license system on most of mercantile and industrial pursuits should be abolished.

The golden eggs that are stowed away as wealth may and should be taxed. Let us favor the laying of good, honest golden eggs. The more we have the lighter the tax. But let us be sure they are laid before we send the tax collector with his titling basket.

AGRICULTURAL NOTES.

California.

BUTTE.

CROP OUTLOOK.—Register, Nov. 23: The rains of last week have done much to revive the spirits of our people, and the ground was wet sufficiently to bring up the grain in good shape as well as to wet the land sufficiently deep to insure it against drying out. The farmers on the river lands have been enabled to start their plows and do good work, and it is safe to say that by Christmas more grain will be growing in Butte county than ever before in one year. We consider it no exaggeration to say, from the present indications, our county will redeem its reputation by producing more grain the coming year, in proportion to its acreage, than any county in the State. The mooted question as to whether grain will sprout, die out and then sprout again, has been definitely settled so far as we are concerned; by a sample of seed subject to this condition brought to our office yesterday, by Mr. J. F. Jaggard, from the farm of Jaggard & Gilkyson, six miles from town. The facts are, that with the first rains a portion of the seed in the ground sprouted and the blade grew to the length of an inch, when the week of north winds immediately following, dried up both stalk, sprout and root, until it was seemingly dead. The rain of last week again sprouted this seed. The sample brought to our office shows the first sprouting in perfect shape, but dead, and new sprouts shooting out vigorously among the dead ones. Our farmers will please bear this fact in mind.

RENTING LAND.—Chico Record, Nov. 23: During the past few years the owners of large tracts of land have been reaping rich harvests from those who rented their acres. When the system first commenced the conditions were comparatively easy, and the renter was enabled to come out with a fair reward for his labor. Two or three years ago the high price of wheat gave a new impetus to the renting of land, and the host of renters were immense. The land owners took advantage of this situation and demanded a higher percentage of the crop. The first was a third to the landlord, and he furnished the sacks and took it from the field. Then followed that the tenant furnish the sacks and haul it to the railroad. The past year we know of land being rented where the renter gave one-half the crop and furnished everything. It is useless to add that the renter sustained a tremendous loss, besides losing a whole year of valuable time which might have been otherwise profitably employed. Farming, like everything else, must come down to general business principles, and be conducted more upon a cash basis than heretofore. Merchants, as well as communities, from the lessons recently learned, see the necessity for a more firm foundation being laid to establish confidence among citizens.

CONTRA COSTA.

THE SEASON.—Gazette, Nov. 23: Although the measure of rain has been light to this date, it has started the surface seed and the grass is almost everywhere an inch or two above ground, giving the earth already a slight tint in all directions that will in a few days deepen to a

positive tone of green over the whole landscape. The farmers are busy sowing their fallow, and to quite an extent are plowing, adobe ground in many situations being now found in the best possible condition for plowing, barring the single objection that the cheat and other weeds have not yet had sufficient time to germinate and put out so as to be killed by the plow.

FRESNO.

SCALE BUG.—Expositor, Nov. 21: Last spring we imported a number of orange trees from Los Angeles. When they arrived here they were badly covered with scale bug—an insect that infests the trees at Los Angeles severely. During the summer the scale almost entirely disappeared from the orange trees, but during the last few weeks we were surprised to find them in abundance on the leaves of a couple of brown Smyrna fig trees, and on a couple of tritomas, or "Red-hot Pokers." Can some of the Los Angeles orange sharps inform us whether or not this is a common occurrence?

LAKE.

FINE RAIN.—Bee, Nov. 21: A splendid rain fell last Thursday and Thursday night. It was a great advantage to farmers, and will give the grass a fresh start, that will soon cover the hills and valleys, to the great delight of stock.

OUR FARMERS.—Lower Lake Bulletin: The Lake county farmer is now busy with his plow and harrow, preparing the soil to plant the wheat and barley and other small grains, and from the large number of farming implements that have been shipped to this county this fall, we conclude that Lake will not be second with her quota of cereals next harvest. Several thousands of acres of summer-fallow land, already put in with wheat, have donned, at this early season of the year, a coat of green, and the growing grain looks thrifty and fine.

LOS ANGELES.

WINTER POTATOES.—Santa Monica Outlook, Nov. 23: Some parties in this place are now engaged in planting Irish potatoes. Messrs. Giroux & McNally are planting 20 acres on the land of Mrs. Lucas, and Wm. Rapp is preparing five acres near town for the same purpose. It seems to us that this industry ought to become general in this locality. One is certain to get a winter crop, and as it is somewhat out of season, the highest prices can be obtained. There is no risk, not much labor, and a sure market.

MENDOCINO.

THE SEASON.—EDITORS PRESS: Beautiful weather; 4½ inches of rain so far, and plows all running; though it has seemed to take more to wet the ground than usual; feed fine and scarcely any frost for a month.—A. O. C., Ukiah.

NAPA.

OUR WINE INTERESTS.—Reporter, Nov. 23: A wine maker's face these days is a joyful thing to behold. The vines have yielded a splendid harvest this season, and the wine product is generally of a very excellent character—sound and good. And what is of equal importance, hungry buyers are around offering to take the contents of whole cellars at prices well in advance of what they were the same season last year. Some small cellars have sold out, but the large ones are holding on for better figures, meantime filling extensive orders for job lots both for the East and for this coast, and at paying prices. A permanent advance in the price of California wines has, we think, now occurred, and which cannot but exercise a marked influence upon the destiny of our county, as wine growing is one of our most important interests, and is susceptible of being increased to a point a hundred-fold as great as at present. Even present prices are remunerative, but when they advance 50% we will see thousands of acres of new vineyards on the hillsides where there is now but a sparse pasturage. Speaking of prices, reminds us to say that the California wine grower now gets only from seven to eight cents a bottle for his best wines, which is cheap enough surely to encourage their introduction everywhere. Yes, a bottle of good California claret can be sold on the hotel tables of Eastern cities at twenty-five cents, and money made by all who handle it. And when we consider that it is the pure juice of the grape, unadulterated and undoctored, we think it should, for the price named, find a place on every man's table, and exclude the vile alcoholic mixtures called whiskies and brandies, which sell at prices from ten to forty times greater than our wines, and kill all who have anything to do with them. We think we see the dawn of a new and better era for our vignerons, and we hail it with delight.

NEVADA.

MR. GILLET'S MEANS AND METHODS.—Nevada City Herald: The nursery of Felix Gillet is located on the top of Aristocracy hill. It is neatly and scientifically laid out, and provided with broad gravel walks and drives, giving it the appearance of a neat public park. Near the center is built the residence of the owner, and further to the rear is the workshop, store-room (formerly used as cocoonery), and book-binders. Here we find diagram maps, showing the location and name of each variety of plant, vine, shrub or tree on the grounds. At the end of each row of plants, vines or trees, is a stake which bears a number, and in a book of record and on the corresponding chart we find opposite that number the name in full, with any remarks which may be noted. In the rear of the dwelling is a rain gauge, located in the open space, so as not to be affected by the different currents of atmosphere. The nursery is

provided with a very large variety of rare and choice plants, shrubs and trees. Our attention was particularly called to a kind of walnut called *Praparturiens*, a Latin name, meaning fertile variety, which Mr. Gillet has imported from France. The points of superiority which this tree possesses are that it is very hardy and can endure severe climate and not be affected by the frosts; that its blossoms about four weeks later than the common English walnut, thus its blossoms are less liable to be frost bitten; that it bears nuts in three years from the seed, or in one year from the bud, while the common walnut tree requires years of growth before it bears fruit. It is a very desirable tree for our climate, for each of the reasons stated. Mr. Gillet will, have about 5,000 of these trees on sale during the coming winter. We saw a tree of the kind we have just described which was only three years from the seed, and had nuts on it nearly ripe. We saw another about six years from the seed which had on about 250 nuts of a good size. We noticed in the nursery several medlar trees, so common in southern England and France. He has several Hungarian lindens, which make a very pretty appearance as a shade tree. The leaves of these trees present great contrast, the upper side being of deep green and the under side of a silvery hue. A large number of Italian chestnuts are budded and nearly ready for transplanting. We noted five varieties of filbert and over 30 kinds of grapes, etc.

SAN JOAQUIN.

A HORSE'S BRITTLE LEGS.—*Herald*, Nov. 23: This forenoon a horse driven in a butcher's cart, and supposed to represent a Centre-street market, the proprietors of which deny any knowledge of the affair, in crossing the Stockton and Lone railroad on San Joaquin street, had the misfortune somehow or other to break one of his legs. The driver of the horse seemed desirous of testing the usefulness of the broken member, and started the horse along. The very first step the horse took after the leg was broken resulted in the fracture of the other hind leg, which popped like a pistol and seemed as brittle as a pipe-stem. The occurrence was witnessed by persons living in the neighborhood, and there seems to be no occasion for any denial of the occurrence by anybody. The horse was shot and killed after it had been allowed to lie there awhile.

SAN LUIS OBISPO.

IMPROVEMENTS.—*South Coast*: Mr. E. L. Reed has lately purchased the ranch known as the Lester Ranch in the San Jose valley, containing 580 acres of land, and adjoining which are from 700 to 1,000 acres of range. Mr. Reed has already begun to improve his new property, and has placed on the ground several loads of lumber for building purposes. He intends also to make arrangements whereby he can irrigate a tract of 80 acres which he proposes to seed in alfalfa this season. He also expects to put up a saw mill for the purpose of sawing up the pine and oak timber in the vicinity of his ranch, of which there is plenty, to supply the farmers of the valley with fencing material for many years to come. This is a good idea, and we are glad to note the fact that the many good opportunities in this county for the investment of capital and enterprise are attracting attention.

SANTA CLARA.

GILROY PEARS TO CHICAGO.—*Advocate*, Nov. 23: A car-load of pears will leave the Gilroy station to-day for the East. We believe this to be the first shipment of this delicious fruit gathered from home orchards for the Eastern market, and as it is no ordinary event for 500 boxes or 10 tons of fruit to be packed and sent so far away, we, like enterprising people, are led to wonder whether it gives the promise of profit in the future, or what it portends. Was it merely an accidental circumstance never likely to occur again, that led John Brittain, the orchardist of San Jose, to send this order to Horace Wilson, of Old Gilroy? As the filling of the order has nearly stripped every orchard of its reserve stock, and produced a corner in pears, causing many a housewife's calculation on pear preserve to be extinguished, it is prudent to feel a little interest in the event, and to exhibit some concern about future pear crops. It is probable if the present shipment gives satisfaction, and we have every reason to believe it will as Wilson is one of the most careful of packers, the demand for pears, and possibly other fruits, will increase every season. Now it is well known that the California pears are esteemed as the finest in the country. Not even in the Levant, where this delicious fruit has been cultivated for centuries, is the pear any richer in flavor or more perfect in form.

SANTA CRUZ.

THE FARMERS' ASSOCIATION.—*Courier*: The ninth annual meeting of the Farmers' Association, for the election of officers for the coming year, was held at the Court-house on Saturday, November 16th, 1878, and the following officers elected: President, J. S. Mattison; 1st Vice-President, R. H. Sowin; 2d Vice-President, J. S. Waite; Secretary and Librarian, Roger Conant; Treasurer, Martin Kinsley; Trustees, C. L. Anderson, J. G. Jenkins, Joseph Francis. The President appointed Dr. C. L. Anderson, J. H. Skirm and Martin Kinsley as the Library Committee. There being no further business, the Association adjourned to the first Saturday in December, 1878.

SHASTA.

CANE SYRUP.—*Millville Record*, Nov. 23: On Wednesday last we were shown a sample of syrup manufactured from sugar cane grown on the farm of A. Musick, on Mill creek. The

sample shown us is of a superior quality, perfectly clear, and of an agreeable flavor. Mr. Musick informs us that from experiments made he has demonstrated the fact that more syrup, of as good quality, can be manufactured to the acre here than in southwest Missouri, where it is made the especial business of the planters. He says that eighty gallons to the acre is a reasonable estimate, and that it will not cost over three bits a gallon to prepare it for market. Next year himself and neighbors will raise a large amount of the cane, and it is his intention to construct a mill to crush the same and make considerable syrup. We see no reason why an enterprise of this character should not be entirely successful here. There is an abundance of water power for mills, timber of various kinds suitable for kegs or barrels, and any quantity of excellent land on which to raise the sugar cane. Any one desiring a light farming business cannot do better than to invest in an enterprise of this kind. We were also shown a sample of tobacco grown on the same place, of which 200 lbs. were raised this year. The leaves are large, well-developed, of fine texture, and with proper curing will make a first-class quality of tobacco. We commend these two industries to the attention of both farmers and capitalists.

SONOMA.

PROTECTION AGAINST WINTER FLOODS.—*Healdsburg Flag*, Nov. 21: The time intervening between harvest and plowing has been mainly devoted to bank-protecting by farmers along the streams. Scarcely any two go about the work in the same way, and more fail than succeed. Although we may be too late for this year, yet it will not come amiss if we offer a suggestion, and that is, that the cheapest and most effective way has been by demonstration proven to be the breast dam process. Wing dams we believe to be prohibited by law, but the breast dam differs in being thrown at right angles across the current, and if made to stand secures a deposit of rich sediment below it, instead of the waste of land that would occur without it. Specimens of these works may be seen just below the county bridge at Healdsburg, where the banks are saved and acres of new land made. One may be constructed very cheaply and as solid as granite in the following manner: Procure piles 20 to 30 feet long and drive them 6 feet apart and 5 to 10 feet deep, as far as you may wish to go into the river bed; then cut trees of convenient size and haul between the piles as far as the limbs will permit, the butts down stream; sink the butts a few feet in the gravel, driving a stake at its head; brace each pile; draw a strong timber down upon the treetops and bolt firmly to each pile, connecting all of them. Then by being careful about protecting the end of the dam next to the bank, you will accomplish the object. As the flood rises it will first run through the treetops, leaving logs, brush, sediment, gravel, etc., till the interstices have been completely filled as though horses and carts had been employed for weeks in doing the job. As an example of this kind of work we cite the one on Wm. Mulligan's place at the mouth of the Sausal, on a simple scale, which the editor of this paper helped to construct, and which withstood the heaviest floods, and behaved as we have said. It did not cost twenty dollars.

TULARE.

ALFILERILLA.—*Delta*, Nov. 23: Mr. Zumwalt has shown us a root of filaree, a sample of such as is now thriving on his place, between Visalia and Tulare, on ground that was irrigated but once this season. It is a curiosity in that it has a little tuft rising out of the center like a sheaf, around which the leaves spread but in circular form. The plant is as fragrant as an filaree patch in spring.

TEMPERANCE COLONY.—The success and prosperity which has been attained by the Lompoc colony, in Santa Barbara county, has often been alluded to by correspondents of the *PRESS*. We understand that the settlement has fully demonstrated the value of its lands and the practicability of the plan upon which the colony was established. An advertisement in another column gives notice that some of the land is still open to settlers and gives some notes on the desirability of the locality.

ANGORA GOATS.—The advertisement of I. H. Love in this issue of the *PRESS*, announces that angora goats may be had in lots to suit, by application to him at room No. 7, 240 Montgomery street. These goats are from medium to high grade, and we understand that they have been bred with care by a breeder who has been long in the business. Those desiring this stock should certainly apply for farther particulars to Mr. Love.

FRESNO SEED FARM.—Many readers will be interested in the advertisement of home-grown seeds, which Prof. W. A. Sanders has in another column. Readers of the *PRESS* know Prof. Sanders from his interesting letters on new plants, which we have lately printed, and he now offers for sale seeds of the growths he has tested. We wish him success and profit in his enterprise.

Sand Cure for Tobacco.

We frequently receive inquiries concerning the growth of tobacco in this State and the market for the home-produced article. In reply we have said that the city tobacco manufacturers take the ground that local grown tobacco is unfitted for their use because of the imperfection in methods for curing. Several processes have been brought forward with good hopes of success, but, so far as we know, none have yet demonstrated their complete success. There is no trouble in growing the weed in many parts of the State, but the desideratum is a method of curing. As the subject is of interest to many, we quote from the *Stockton Independent* a description of a method practiced by J. R. Opitz on Danger's ranch, Roberts Island, and which is said to produce excellent results. Mr. Opitz writes as follows: I used Connecticut seed, as it makes a hardier plant than any other kind of tobacco; the leaves grow closer together, it does not grow so high and is not, therefore, so much affected by the winds. I plant in rows four feet apart, about 30 inches apart in the rows, and after topping, keep about 16 leaves, having previously removed the lower "sand leaves" when ripe, which is ascertained by doubling up a leaf between the fingers. If it is crisp and brittle, it is fit to cut. If the tobacco is perfectly ripe and the soil sandy and dry, I break off eight leaves of the plant, lay one on top of the other, and place the pile on the ground. Then take down the other eight and make a similar pile, and so on through the row. I then take a shovel or hoe and cover the whole with about an inch or two of the soil, then start on picking another row, repeating the operation until the whole is covered. If the sun is too high it is better to cover oftener to prevent it from getting sunburnt. It will now commence curing right away; the sun heats the sandy soil, the tobacco has moisture enough to create steam, and in about two weeks the tobacco will be perfectly cured. It is then uncovered and assorted into wrappers, binders and filling, made up into bundles of about 12 leaves and hung up in a shed (which is strung across every two feet with ropes or thin wire), and left until the stem is perfectly dry. If, however, the soil is not perfectly dry or less sandy, or more lumpy, I treat it differently and cut down the whole tobacco stalk, commencing about four o'clock in the afternoon and cutting down as much as can be well handled the next morning before the sun gets out too hot. I then gather together the tobacco from about nine rows and make one row out of it, being the middle or fifth, and interlap it, laying five rows one way and four rows across the other way, and cover the whole with whatever is handy—straw, weeds, or old gunny bags. In about six days the tobacco will be all yellow and commence curing. Then I begin to take off the leaves, putting them in piles about eight thick in rows and cover with about one inch or two of soil, and in about 10 days the tobacco will be cured. It has then to be hung up in the shed to dry. This second mode of curing has to be adopted on account of an excess of moisture; the six days laying together will dry up some sap and start it in curing. After the tobacco is perfectly dry it ought to be packed down solid, either in bulk or in cases. Tobacco cured in this manner is sweet and has a fine aroma. The soil seems to take out all the bitterness and leave a pleasant taste after smoking. It is, however, only fit for cigars or smoking tobacco, especially the latter, for it has more body than any other tobacco grown in the United States for manufacture of cigars. The Connecticut, New York or Pennsylvania tobacco gives excellent wrappers, but if fillings are used from the same article it makes only an inferior cigar. We have, therefore, to import filling at a high price from Havana. The California tobacco will in some measure fill up this void. I will only mention in this connection that to raise a good article of tobacco we must avoid alkali, for when the soil is impregnated with alkali it will be a failure, because the tobacco raised on such soil will turn black and keep no fire. We can raise about 1,200 pounds of tobacco to the acre for the first cutting. The second cut is an inferior article of about 300 pounds, and scarcely pays the trouble of taking care of it unless raised on a large scale.

BERNARD F. KENNEY, Workingman's delegate to the Constitutional Convention from San Francisco, is dead.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING NOVEMBER 12TH, 1878.

SAW GUIDES—James Griffin, Mendocino, Cal.
LOCKS—John Jett, S. F.
MILLS FOR GRINDING ORE—Wm. C. Salmon, John F. Salmon and Wm. H. Harris, Portland, Ogn.
WATER GATES—Philip Giovanni and Bruno Bernerscheidt, S. F.
ORE STAMPS—Stephen Kendall, Jackson, Cal.
SAFETY ATTACHMENTS FOR HOISTING CAGES—Charles W. Lane, Aurora, Nev.
COPY HOLDERS—Henry A. Peabody, Sacramento, Cal.

News in Brief.

REVOLUTIONARY plots in Peru.
THE Marquis of Lorne has arrived at Halifax.
THE fishery award has been paid under protest.
RUMORED trouble with the Umatilla Indians.
WELSH slate quarries are reducing their force.
THE Southern Pacific railroad will probably reach Gila City.

and lowering wages.
A NEW deposit of guano is reported discovered on the island of La Rida.

SCHOONER *Laura Pike* wrecked on Humboldt Bar. Seven persons lost.

LABORERS are being sent to the Colorado desert for the progressing railroad.

BEACONSFIELD, notwithstanding, Parliament will meet on December 5th.

IN case of war with a foreign power, 90 vessels could at once be supplied.

A BARREL of Peruvian yellow potatoes has been received at Washington.

AN English forger has been arrested in San Francisco, and an American defaulter in Lisbon.

IT is rumored that a line of steamers between New York and China is to be established.

IT is estimated that 70,000 boxes of raisins have been made in California this year.

CAMP equipage has been called for by the English army in South Africa. More war.

HAYES has congratulated the Italian King on his escape from the dagger of the assassin.

THE Russian commander in Roumania has been suddenly ordered to postpone his departure.

AN engineer will be put in the field immediately and make a definite location of the route of the Chico and Colusa railroad, and begin to get the right of way.

Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending November 29, 1878.

HIGHEST AND LOWEST BAROMETER.						
Nov 20	Nov 21	Nov 22	Nov 23	Nov 24	Nov 25	Nov 26
30.18	30.05	30.16	30.10	30.03	30.21	30.20
30.06	29.98	30.11	29.95	29.94	30.10	30.12
MAXIMUM AND MINIMUM THERMOMETER.						
63	66.5	63.5	62	67	62	60
54.7	55	52	52.5	52.5	50.5	50.3
MEAN DAILY HUMIDITY.						
73	72	88	81	42	62	75
PREVAILING WIND.						
NW	NW	SW	NE	E	N	N
WIND—MILES TRAVELED.						
75	154	173	93	97	105	106
STATE OF WEATHER.						
Clear.	Clear.	Fair.	Clear.	Clear.	Clear.	Clear.
RAINFALL IN TWENTY-FOUR HOURS.						
Total rain during the season, from July 1, 1878, 2.40 in.						

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

Unrivalled Offer in Organs.

Read the advertisement of Daniel F. Beatty, of Washington, New Jersey, whose instruments have become celebrated for their unexcelled qualities and tone. The offer is only good for 30 days.

Wanted—Farms to Rent and to Purchase.

I have numerous customers in search of rural property daily applying at my office. Send full particulars. Address: A. Zeelandelaar (formerly with Labor Exchange) Real Estate, Business and Employment Agency, No. 627 Sacramento street, San Francisco. (Furnishes all kind of farm labor at the shortest notice, free of charge to employers.)

The plowing season setting in, farmers are reminded that they can get the most reliable and competent help (free of charge) at the old employment office of A. Zeelandelaar (formerly with Labor Exchange) 627 Sacramento St., San Francisco.

POPULAR MUSIC.—Make your homes merry and popular with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. The *RURAL PRESS* can offer to introduce you there.

THE celebrated Troy (N. Y.) shirts can be found at Palmer Bros., No. 726 Market street, San Francisco. They keep a full and complete stock, laundered and unlaundered, of men's and boys' sizes of the above make.

WHEN A LADY wants a cloak or suit for herself or child and feels in doubt where to buy it, we cheerfully recommend her to go to Sullivan's, No. 120 Kearny street, San Francisco, where she can always find the cheapest and best assortment.



The Cart Track.

A rough, uneven way streaked deep with wheels,
Forming the barn's green lane and leading toward
The living farm-yard; issuing thence it makes
The meadow road o'er which the gray green mound
Of hay slow totters to the loft; up then,
Leaving the meadow, the straight timber track
Clambers the orchard for the ponderous loads
Of apples to the cider mill; then on
Through upland pasture to the ridge's crest.
All the farm realm in boundless smile is seen,
With the red rustic housestead in the midst
Of clustering sheds; then leading to the woods
That open a smooth way to a rich in grass,
Fern-fringed and plump in moss, the road is lost
In tangled thickets and close-pillared trees.
A pleasant track! In summer the broad lane
Is margined with great sashes of gray dock,
With velvet milkmaids and short nibbled awd,
Where knots of yellow butterflies break out
Of damp, deep runs and bees spot thistle-tufts,
And in the sunset eddies to the lows
Of homeward kine, whose polished skins throw back
The level rays that paint broad silhouettes
Upon their sides, and gild the red tails poised
On the trim farm-girls' heads, which soon will brim
With foamy silver. Down the twilight-track
From the dim fields, a shape of India ink
Shows Roughhead in the cart, with here and there
Crumple and Crookhorn grazing likewise down
And the dark ghosts, old Maggie and her colt,
Gilding along the margin. Now and then
Staid Ponto breaking from his steady trot
Under the cart, into a canter, barks
Hoarse at the haggard kine; Crook tumbles forth
Into a straining gallop; Crumple stops,
Swinging her front; then Ponto turns his charge
Towards the pert colt that jerks his slender heels,
Shrill neighing, while the spectral dam strikes out
Her fore feet at the foe. Pale, moving blotches
Show the mixed flock that all day long has lain
Upon the pasture crest, now streaming back
To the nooked farm yard. A rude, usual scene
Of country life, and yet a picture full
Of olden joys and youthful memories.

Her Rose Garden.

Being a Tale of Two Young Married People,
and their Gardening Mishaps.

[Written for the RURAL PRESS by CHARLES H. SHINN.]

CHAPTER I.

John Bailey, and his wife Marian, began their experience of California farming in a moss-covered shanty set upon a treeless plain in the southern part of the great Salinas valley. He had been a brisk mechanic in San Francisco, but times were hard and work slack, so he took the little he had saved up, and, returning to his boyhood's trade, rented a piece of land, and turned his back upon the bustling city. At this move his wife greatly rejoiced, for she loved the country, and thought that birds, flowers and streams were always to be found there. So, of course, she had a feminine cry when she first saw the desolate land, gray, silent, mysterious; but soon, with equally feminine pluck, she arose to the emergency.

"John," said the little lady, with an air of resolve, "I must have some kind of a garden here. Why, this is very forlorn, with not a leaf in sight!"

"Well, I don't know what we can do," said John, helplessly. "I can't afford to fence in a garden this fall. Besides, our well is so deep that it will be no fun to water from it. But I'll try it, if you say so."

"Of course, I say so," she replied, triumphantly waving a butter dish in one hand, for her occupation at that precise moment consisted in setting the table for breakfast. This performance, and the subsequent operations of dish-washing being completed, she tied on her natty little sunbonnet, which, if the truth must be told, became her amazingly, and started out to find the wherewith for her, as yet, only imagined garden.

Truly it was, in that early autumn, a saddening sight. The rudely built shanty, the deep well covered with a few broken boards, the shattered barn, around which a few lean horses meandered peacefully; nothing else was anywhere visible, except a faint dust on the distant highway, and, also, against the very edge of the western horizon, black and small as moving flies, she saw the teams passing to and fro, sowing the former tenant's summer-fallow.

Mrs. Bailey looked at the cloudless and dazzling sky for a singing bird, but in vain; she searched the vacant and trampled space around the house for signs of former flowers, no shrub, or vine, had, seemingly, ever been planted. Indeed renters, unless they lease for a long series of years, seldom plant anything permanent, but live, as their predecessors lived, in yearly expectation of a change. Now and then a few flowers in boxes are cared for by the mother and daughters. Oftenest, however, we will find renter's homes perfectly barren of all beauty, lonely, decaying, hopeless.

Mrs. Bailey found near the old barn, a few broken boards which seemed useless for any other purpose. She carried them to the house, and made a rude shelf beneath a window on the east side.

"Now, if I had some boxes," she said to her-

self, "and some of the nice window plants I've seen, a begonia, a double geranium, some portulaca and a smilax vine, wouldn't even these old warped and splintered boards look splendidly? The next thing to do is to talk with John."

At the next leisure time, which happened one Sabbath afternoon, she showed him what she had accomplished, declaring, with various little pretty expressions, and energetic gestures, that she must have some flowers. They were quite as great a necessity as wheat; and her flower-stand, she exclaimed, was much more important than that new pig-pen he wanted to build. John, a tall, brown-fisted, blue-eyed man, watched her with close attention and delight. He had, it is true, no particular affection for flowers; but as for his wife, Marian, yes! that was something nearly perfect in his eyes, and her swift speeches, her quaint ways, odd fancies, and over-flowing kindness and affection, were, for him, an endless source of comfort and inspiration.

"John," said she, looking up suddenly, "why is it that renters generally have things so desolate, and dreadfully forlorn, and go off and leave them so? Why don't the owners of the land see to it that renters have gardens, and so keep them longer?"

"Why," said John, in his quiet way, "When a man owns ten or twelve square miles of wheat land, which he rents in small tracts, and lives in some town himself, he doesn't care about the appearance of the country; he isn't anxious for little improved places, with orchards and gardens. He only wants his regular cash rent. It does not seem to be altogether the best thing for the country. If you will let me parolize Goldsmith—"

"Yes! I'll let you parolize anything which applies to the discussion," cried Mrs. Bailey.

"Well, I think this does—"

"Ill fares the land to wandering hills a prey,
Where ranches grow and modest homes decay!"

Mrs. Bailey clapped her hands. "That appears to be it precisely. Now really John, who could have guessed you was so bright? But what are the 'Wandering Hills'?—O! I know. Tramps, of course, what else could they be? There was one of very wild appearance who came by here yesterday, and I gave him some slices of bread and butter. Then he asked for some coffee—but you don't suppose I made up a fire on his account, do you? So that 'wandering ill' went off without it."

John laughed. He hated tramps, and he hated to have his wife annoyed by them, but still her bright conversation amused him.

"But," said he, "how much money do you want?"

"I want just what we can spare," she said, "and not a cent more. You know that when we were married the agreement we made was that you should always let me know exactly how our finances stood, so that we should have no secrets, and I should never, never run you into debt by any extravagance."

"Yes! we went into a life-partnership," said he, "and we've lived up to it honestly ever since. But I've been thinking it over, and we can spare five dollars for seeds and plants. Then, too, when I buy the lumber for the new pig-pen, there will be enough left over to fence in a few feet against the end of the house."

"You dear, old John! you will have no cash left," she exclaimed, with an assumption of anger.

At the first leisure hour Mrs. Bailey took the last number of the RURAL PRESS, and wrote for catalogues to all the seedsman and nurserymen who advertised therein. After a due season they came, and the labor of making a choice began.

"There are too many kinds of plants in the world," said perplexed Mrs. Bailey. "Who could possibly choose without seeing them all in bloom?" She wrote out lists of seeds to the full amount of her five dollars. She selected shrubs and flowering plants to the same limits. She compared, criticised, condensed, made new lists.

"What would you do, young woman," said the amused John, "if you had fifty dollars to spend, instead of five?"

"That would be much easier," said she, "for then I could order all I want, and survive it if some of them were worthless. But now every cent must count."

So John nodded, and went off to his work.

"Now," said pretty little Mrs. Bailey, left thus to her own devices, "it is nearly winter, and I mustn't have those orders on hand any longer. They shall be finished to-day, for weal or for woe, and John shall mail the letters when he goes to Gonzales to-morrow."

That night two completed letters lay in Mrs. Bailey's work-basket. The first, addressed to a leading seedsman, enclosed a one dollar green-back, and a neat little note which asked for the following list of seeds:

Aster (peony-flowered) mixed.....	\$0 10
Sweet Alyssum.....	5
Canary-bird Vine (Tropaeolum Peregrinum).....	10
Delphinium Fornsium.....	10
Lobelia Speciosa.....	10
Pansy, mixed.....	25
Portulaca, double, mixed.....	15
Petunia, mixed.....	10
Sweet Pea, mixed.....	5
Total.....	\$1 00

The other letter, sent to a leading nurseryman, enclosed \$4, and asked for:

1 Smilax Vine (small).....	\$0 25
1 Begonia, for winter blooming.....	25
2 Carnations, 1 white, 1 red.....	75
2 Fuchsias, double red and double white.....	50
1 Spirea Prunifolia.....	25

6 Roses, one each of those named: Isabella Sprunt, canary yellow; Bella, pure white; Bon Silene, purplish carmine; Madame St. Joseph, pink; Gen. Jacquinet, crimson; Yellow Banksia, climber.....

Total.....\$4 00

"Hullo," said John, when he read these lists, "it will be all roses—that coming garden of ours."

"Yes," replied she, "I came pretty near buying just a dozen roses, and nothing else. A rose garden, sir, is delightful. It has been famous in song and legend since the days of Eden. Yes! I am going to plant roses, and you shall help me water them, and I'll always put a rose bud in your button-hole on Sundays, and this shall be 'Rose Cottage, where Mr. Bailey lives,' not a 'renter's shanty' any more."

Well, the seeds came, with several extra papers, put in by the kind seedsman; and the plants came, with two extra roses, and there were enough bits of board left over to build a patched-up little fence enclosing a garden twenty feet long and eight feet wide, against one side of the house. Mrs. Bailey went out and waved her sunbonnet with great enthusiasm when the fence was fairly done.

"That means a rose jubilee in the fullness of time," she said.

"That means sand, manure, water, patience, and sunburnt faces," was John's reply.

She waved her sunbonnet again, "Bailey and Co. will win!"

Then winter came. The roses, carnations and spirea were planted in the little garden. The smilax and fuchsias were set in the window, where they grew alarmingly. And as for the seeds, and how they were planted, and all subsequent adventures, the gentle reader is invited to wait till the next chapter.

Niles, Cal.

House-Hunting in Shasta County.

[Written for the RURAL PRESS, by Mrs. J. M. K.]

Although I have not seen your familiar face for six long weeks, I must give your readers a hasty sketch of our experience and success, house-hunting,—for we really have filed a homestead claim upon vacant land in Shasta Co. Ever since reading those charming articles about Shasta Co., by Chas. Shinn, hope revived in our hearts that there might yet be vacant land in California worth taking up.

Resolved, to make no unnecessary delay, as soon as crops were disposed of we left the San Joaquin equipped for a camping expedition. We had hoped to reach Sacramento for the State fair, but were unable to start before Sept. 30th. This, however, gave us the happy opportunity to look into the State Grange.

At Sacramento we were reinforced by mother and sister, who came upon the boat, making our party consist of eight persons, children included.

Taking the east side, we traveled slowly up the river, inquiring the price of land, and terms of rent, but found no inducement to stop, the good land being very high, and terms of rent such there can be little or no profit to the renter. But the greatest objection to this part of the State must be the ague, and other malarious diseases. People owned to having the ague from Sacramento to Red Bluffs. One fact that surprised us very much was that we never saw a squirrel, from the time we crossed the Mokelumne river until near Chico.

It was indeed a pleasure trip with perfect weather and moonlight nights, until reaching Singer's creek, Tehama county. Here we encountered a storm the morning of October 15th. The wind blew so furiously as to throw down our tent about day-break, and our situation seemed rather serious. We went, however, to the nearest farm-house, and getting permission to set up our little stove in an out-building, laid by two days for the rain and to dry out.

Above Chico, we began to meet returning emigrants; they generally presented a very forlorn appearance and gave discouraging accounts of the country north. One old man with a large family and four half-famished horses said he was now on his last \$20 and stopped to find a few days work. He had been to Washington Territory, but was making his way back to Santa Barbara county. Another man had been to Oregon and returned to Tehama county, and was locating upon a stony place he believed to be vacant. These reports of themselves would not have alarmed us much, knowing there are always dissatisfied people roving from place to place. But the fact that good land in Tehama county, remote from market and town privileges was held at from \$40 to \$60 per acre, made our faith almost fail to believe good land was lying vacant a few miles north. We began to look back kindly to San Joaquin and hint an early return, not however, before seeing the land near Igo, which was the place in mind.

We generally asked the emigrants if they had read the RURAL PRESS, or been to Igo. No, they had never read the PRESS and never been very near Igo. Still, I began to fear Mr. Shinn was not a practical man, but an enthusiast and that we were enticed so far to be disappointed. I grimly resolved that I would well inspect the locality and show the other side of the story should it seem less desirable to us.

Reaching Red Bluff, a chilly sensation felt several mornings developed into a decided ague chill, followed by high fever. The prospect of sickness without a shelter was not a cheerful one, and would have been gloomy indeed had it

not been for the favorable change in the country, which was constantly ascending. It seemed pleasant to come up out of the low lands into the higher and purer atmosphere. Here we were told ague was very rare, and that there was less upon the west side, also that there was vacant land only a few miles from town. Red Bluff is a very interesting, lively place. We met emigrants going to locate upon the Cottonwood, and waited near town one day for them, thinking to inspect that locality. Fearing rain before a shelter could be put up, we decided to go direct to Anderson, hoping to find a house to rent. Before reaching that place, another of our party fell a victim to the ague, and we were disappointed to learn no house could be had. Here we waited nearly two weeks, camped near town in a beautiful grove. Here let me say, we found kind and social people all the way, but at Anderson we seemed to meet the welcome of friends. Mr. and Mrs. Anderson, of the American Ranch hotel, and Mr. and Mrs. Frisbie showed us no little kindness while waiting sick in camp. Anderson is a cheerful little place, and growing, if I may judge of the continuous sound of the hammer. There are now, I believe, buildings going up for the convenience of renters.

Now, to my great disappointment, Mr. Keringer was forced to leave me behind, and prospect the promised land alone. The beautiful country around Anderson prepared us to expect a favorable report from the vacant land between that place and Igo, and such it proved to be; but believing no home-hunters would come this fall to a region where for miles no human being or habitation was to be seen, we hoped to spend the winter in Anderson, and take our time choosing locality. Vain hope; November 2d, hearing several men had located but that day, and many more were coming soon, fearing to lose our opportunity after coming so far, we hastily struck our tent for a march into the wilderness. Being now almost well we enjoyed the ride, especially after emerging out of Spring gulch up on the level roads of the table land. Beautiful! charming! was the verdict of all. Thanks, Mr. Shinn, no disappointment at first sight here. I never could have passed this lovely spot with only a mere mention. But I must defer description until another time.

Shasta, Nov. 14th.

FARM LIFE.—It is a common complaint that the farm and farm life are not appreciated by our people. We long for the more elegant pursuits, or the ways and fashions of the town. But the farmer has the most sane and natural occupation, and ought to find life sweeter, if less highly seasoned, than any other. He alone, strictly speaking, has a home. How can a man take root and thrive without land? He writes his history upon his field. How many ties, how many resources he has; his friendship with his cattle, his team, his dog, his trees, the satisfaction of his growing crops, in his improved fields; his intimacy with nature, with bird and beast, and with the quickening elemental forces; his co-operations with the cloud, the sun, the seasons, heat, wind, rain, frost. Nothing will take the various social distempers which the city and artificial life breed out of a man like farming, like direct and loving contact with the soil. It draws out the poison. It humbles him, teaches him patience and reverence, and restores the proper tone to his system. Cling to the farm, make much of it, put yourself into it, bestow your heart and your brain upon it, so that it shall savor of you and radiate your virtue after your day's work is done!—John Burroughs, in Scribner.

DISCOURAGEMENTS.—In the battle of Lake Erie Commodore Perry stood upon the quarter-deck of the flag ship looking down upon the men who manned the great gun. A broadside from the enemy swept them away. The reserve corps seeing their companions mangled and dying, and thinking of homes and wives and children, turned pale and hesitated. Their beloved Commodore looked at them silently. Gazing into his face, without a word they stepped to their places and worked the gun. The ship sank. Out of one hundred souls on board only twenty escaped. Yet the battle was won. Satan means that discouragements should keep us from our work. The Lord means them to arouse all our love and trust and courage. Look at the discouragement and you will shrink, falter, fail. Fix your eyes steadfastly upon the Lord Jesus as he silently watches you, and you will go forward. Even should the ship sink, your ruin appear to be complete, yet the Lord's battle shall be won, and you shall be crowned. "In that glorious war, they conquer though they die."—Rev. E. C. Ray.

MR. LINCOLN'S HONESTY.—The following story is told to show the rigid honesty of President Lincoln in early life. When he was postmaster in a small Illinois village word came that the postoffice agent would be along in a day or two to collect the money due to the Government. It was about \$75, and one of Lincoln's friends, alarmed lest the young postmaster should be embarrassed by the sudden demand for so much money, offered to lend him the sum. Mr. Lincoln declined the proffered kindness, and, going to the upper shelf of a closet, brought down a bag containing the amount in the very coins which had come into his hands. He said he never allowed himself to use, even for a day, money which was in his possession belonging to other people.

Chaff.

A PAINTER'S apprentice fell off the scaffold with a pot of paint in each hand. He was taken up insensible, but as soon as he was restored to consciousness he murmured: "I went down with flying colors, anyhow."

MADAME V—has a passion for always dressing her daughter in clothes that are a great deal too large for her, on the ground that she is still growing. "My dear," said she, "you can't put on that dress, it is worn out." "What a pity! It was just beginning to fit me."

A FULL-BEARDED grandfather recently had his beard shaved off, showing a clean face for the first time for a number of years. At the dinner-table his three-year-old granddaughter noticed it, gazed long with wondering eye, and finally ejaculated, "Grandfather, whose head you got on?"

CONSCIENTIOUS Greek professor, remonstrating with Sophomore for creating disturbance in the classroom, lays his hand insinuatingly upon the refractory one's shoulder, and says: "My dear young man the devil has hold of you!"—*Nassau Literary Magazine.*

A LITTLE Chicago girl while sitting at the table, a short time ago, held a piece of cake in one hand and a cup of milk in the other. Holding the cup a short distance from her mouth, she looked down at the cake and remarked, "You can get in."—*Frank Leslie's Sunday Magazine.*

A LADY, after correcting her little girl's pronunciation, said: "My dear, try not to talk so flat." That night the little one was found propped upright against the head of her bed, preparing to sleep. "Why is that daughter?" asks mother. "Mamma, I thought if I didn't lie flat I wouldn't talk flat."

A LITTLE fellow, watching his elder and better using a flesh-brush, said: "Grandfather, why do you dust your legs? That's for your hat." The same boy was addressed by a lady friend: "Look, dear, there's the full moon." "Yes, it is," with an admiring accent; suddenly—"What is it full of?"

At a recent marriage in a suburban town the bridegroom, when asked the important question if he would take the lady for better or for worse, replied in a hesitating manner. "Well, I think I will." Upon being told that he must be more positive in his declaration, he answered: "Well, I don't care if I do."—*Boston Courier.*

A WEST HILL man painted a ferocious looking sign, "Look out for the dog," and put it up in the front yard to scare away tramps. The next morning a tramp with a bad smile shoulders like a load of hay a club with death smiling out of every knot of it, rapped at the front door, demanded some hot biscuit, meat, potatoes and a cup of coffee, and asked pleasantly, "how is the dog?"—*Burlington Hawkeye.*

In the city of Halifax there dwelt a lawyer, crafty, subtle as a fox. An Indian of the Miami tribe named Simon owed him some money. The lawyer had waited long. His patience at last gave out, and he threatened the Indian with lawsuit, process and executions. The poor red man got scared and brought the money to his creditor. The Indian waited, expecting the lawyer would write a receipt. "What are you waiting for?" asked the lawyer. "Receipt," said the Indian. "A receipt?" said the lawyer, "a receipt; what do you know about a receipt? Can you understand the nature of a receipt? Tell me the use of one and I will give it to you." The Indian looked at him a moment, and then said: "S'pose maybe me die; me go to heben, me find the gate locked, me see 'Postle Peter, he say, 'Simon, what you want?' me say, 'Want to get in;' he say, 'You pay Mr. J. dat money?' What me do? Me hab no receipt. Have to hunt all over hell to find you!" He got a receipt.

CORRUPTION IN HIGH PLACES.—Mr. Wendell Phillips gives utterance to another sentiment that will find a response in the intelligence of that great middle class now being ground and crushed between the upper and nether millstone, wealth at the top, vice, ignorance, and idleness at the bottom. Mr. Phillips says: "If corruption seems rolling over us like a flood, mark it! It is not the corruption of the humbler classes. It is the millionaires who steal banks, mills, and railways. It is the defrauders who live in palaces and make way with the millions. It is the money-kings who buy up Congress. It is the demagogues and editors in purple and fine linen who bid \$50,000 for the Presidency itself. It is greedy wealth which invests its thousand millions in rum to coin money out of the weakness of its neighbors. These are the spots where corruption nestles and gangrenes the State. If humble men are corrupted, these furnish overwhelming temptations. It is not the common people in the streets, but the money-changers who have intruded into the temple that we most sorely need some one to scourge. If the hills will cease to send down rottenness, the streams will run clean and clear on the plains."—*Argonaut.*

BORN IN A BALLOON.—There is one child that has started pretty high in the world. As the captive balloon in Paris was mounting to the clouds recently, a lady in the car was taken ill. A doctor from Tarbes, who happened to be in the car, saw her safely delivered of a boy before the balloon reached the ground, when a cab took the mother and child to a hotel. The husband, son of one of the leading Manchester manufacturers, presented the doctor with \$100 for his services.

Young Folks' Column.

Stories Told Around the Fireside.—No. 1.

[Written for the RURAL PRESS by NELL VAN.]

"Well, boys, here's a story for you," said Uncle Dan, throwing down the newspaper he had been reading. We were all sitting by the fire that blustering November night in old New England. Grandmother sat in her tall backed rocker in the corner knitting blue yarn stockings, and we were teasing her for a story about old times. "Why is it I wonder that children, the world over, are always teasing for stories, and true stories always snit them the best." We turned towards Uncle Dan to see if he was in earnest, for it was but seldom that he came down to our level and cared to do anything to amuse us boys. "Set 'em to work," he would always say when any of our pranks were complained of. We had begun to look upon him as a sort of mild enemy of childhood, especially boyhood.

We were as still as mice, looking wistfully up into his good-natured face waiting for him to begin. He poked the fire and threw on another log, and, clasping his hands behind his head, stretched back in his chair and began something like this:

"Old Squire Lothrop was a notoriously lazy man. Some folks think that laziness is a habit that fastens upon boys and often sticks to them through life, but I've seen boys that were lazy by spells, and men, too, for that matter, so that I begin to think that laziness is a sort of disease that increases or diminishes according as it finds anything to feed upon. The old Squire had been brought up on a farm and had to work early and late in his young days, though they said it always went ag'in the grain. He had prospered in the world through being elected town clerk and various other offices from time to time, which did not prevent him from indulging in his lazy ways. There is a difference in men as there is in boys about the way this disease which I call laziness manifests itself. In some cases a man will sit by the hour holding his hands before him looking into vacancy, totally unconscious of all that is transpiring around him. Or he will lie on the lounge from morning till night reading a book in which he will be so much engrossed that he will never hear the dinner-bell nor any loud conversation, unless he is taken hold of and brought back to himself, as it were. In other cases you find him trotting off to the tavern to loll around, listening to gossip and laughing at stale jokes, with a few kindred spirits, over their mugs of ale. Nothing goes amiss with these 'hail fellows well met,' and the day never seems too long for them.

"Now the Squire was not like either of these. He had it bad, but unlike anybody else I ever heard of. His laziness seemed to crop out in a most aggravating way, mixing itself up with other troubles, exciting folk's sympathy and requiring their care and attention. Aunt Lothrop, as we all called the Squire's wife, and Miss Silence, his maiden sister, were often put to their wit's ends to account for the thousand and one ailments he complained of from time to time. First it was 'dyspepsy,' as he called it, and then how he would sit by the fire and gulp and wheeze, and snarl at everybody and everything. He knew those hot biscuit always served him so, especially with fried pork for breakfast. Why didn't they know better than to set such things before him, he would whine. Then it would be 'rheumatiz,' that stiffened his limbs so that he could scarcely walk. Oh, how he would groan and grunt as he went with a cane from the table to the fireplace! He never thought of such a thing as stopping the rations. He could eat just as heartily as if he was working hard the 'whole day long, and that was how he kept on getting worse."

Now I'm coming to the funny part, boys; for there is a funny part to most everything if you only know how to find it. Old Squire Lothrop had a weakness for bee hunting. From early boyhood he had been known for miles around as the smartest bee hunter in those parts. He had studied the habits of bees till he knew all there was about them worth knowing. I've seen old Squire Lothrop when he had to hobble with one of his bad spells of rheumatism, pick up his hat in hot haste if he heard but a whisper of bee swarming. Away he would go, limping at first, to tramp off for miles in pursuit, and invariably coming off victorious. The exertion caused his blood to circulate more freely, the consequence was that his rheumatism and laziness had taken flight. Whether he brought home any honey or not, he had lost his old enemy for a while, and peace reigned in the household you may be sure. Miss Silence used to say that one bee hunt did more for Johnathan than the whole apothecary shop full of medicines could do. It was just the same with 'dyspepsy laziness.' Once get his thoughts flitting after the bees and he would drag that long lank body of his after him through the woods and underbrush till he would come home all beat out but cured. Then his eyes would snap as he would relate his wonderful exploits to the astonished dames, who considered his cure the most remarkable part of the affair.

"Now, boys, there's a moral to this that I want to point out to you right here. Everybody has a weakness for something. That is, every boy has a decided taste or passion for some particular sport or occupation. You can't

always find it out very readily, but there are some things you each like to do better than anything else. Try each of you to find out what your weakness or talent is, so that you can, if possible, make it of some practical value to you in after life. And above all things do not harbor that enemy to happiness, laziness, which saps the vigor of manhood. Overcome every tendency to indulge in mere idle wasting of time, or it will buckle itself upon you and wheedle you into believing you are a victim of any number of diseases.

"Think of the misery one such being can cause in a family, and do not cease trying as long as you live to think of others first and yourself and your bodily ailments last, if you wish to be happy, and not dwell in the memories of those who come after you as notoriously lazy, or notoriously anything else not a whit better."

GOOD HEALTH.

The Sun Bath.

Dr. E. C. Angel gives to the *Sanitarian* his views on sun bathing. He says: "My own personal observation of the efficacious results of the therapeutic use of the solar rays extends over a period of fully 12 years, and embraces a considerable variety of diseased conditions, for the most part chronic." He believes in the use of what he calls a "solarium," and gives farther details as follows:

It is important that the solarium should be well ventilated, and the best results, it will be recalled, are recorded of open air insolation. Modern costume deprives the body so much of light and air that the skin lacks sensibility as well as tone; and there is not only great advantage to be derived from the sun, but there is often much benefit received from exposure to the wind.

The sun alone reddens, the sun and wind conjoined magnificently bronze, the exposed surface in a manner that the winter months will not efface, while the benefits and strengthening effects are still more lasting. Insolation under glass, however, whether white or colored, is a bleaching process, in which there is neither burning nor discoloration.

The construction of a solarium is very simple. Its situation in cities should always be at the top of the house, and a high house at that, that it may admit air, light and sunshine from all sides. The roof should consist of sash and glass—an outer layer of white glass and an inner layer of blue glass—with an air space of an inch or more between. The sides should have double sash as well as double glass, and may be ornamented with varied colors and figures to amuse the eye and please the fancy. This mode of construction will diminish the intensity of the heat in summer and the cold in winter, and practically makes the structure available for every day in the year on which the sun shines.

Leading from the apartment already described should be another, with enclosed sides of lattice, consisting of revolving blinds. This room should be open at the top, and would only be available during the warm season. The use of the blinds are threefold—to screen the inmates, to regulate light and shade, and to temper the winds to the nude tenants.

In conclusion, I will not go quite as far as Voltaire, who advised two dull actors to plant themselves in the sun for six months; but I will take the liberty to urge an increased attention to solar therapeutics on the part of the medical profession, for the sun's rays may be employed with absolute advantage and with as absolute safety.

Without anticipating medical miracles, the professional practitioner may rely upon deriving from judicious insolation such ruddy complexions, hardened muscles, improved digestion, purified blood, enlivened spirits, and invigorated vital powers as shall more than justify all I have advanced in defence or praise of solarization.

A NEW TREATMENT FOR CONSUMPTION.—The *Medical Record* gives the following: The theory of cure is to clear the lungs by a mechanical effort, chiefly by manipulating the muscles of the throat so as to cause more forcible breathing; second, to establish perfect digestion; third, to promote a process of healing the tubercles, so that they shall become chalky or calcified masses; fourth, to compel the patients to take plenty of fresh air, sunlight and outdoor exercise. To secure perfect digestion a special diet is ordered in each case, and the food is changed as the power of assimilating it improves. To promote the calcifying of the tubercles the salts of lime, which are found in most vegetable and animal food, must be supplied in a soluble condition; the theory is that too much heat in ordinary cooking destroys the natural combination of these salts with albumen and renders them insoluble to a weak digestion. Outdoor exercise is regarded as so important that the patients are instructed to go out in rain, snow, dampness, or even night air or dew, the habit thus acquired neutralizing the danger of catching cold from such exposure. Only strong head-winds and extreme hot weather need be guarded against. The patients sleep with the windows open, summer and winter.

THE ORANGE.—The orange is very easily digested, admissible in health and disease, and one before breakfast will often prepare the delicate stomach for a good meal better than anything else.

DOMESTIC ECONOMY.

LIME-JUICE BISCUITS.—It is not very satisfactory to tell about a thing without giving directions for doing it, but this is all we can do with 'lime-juice' biscuit. We give the following facts as vouched for by an English exchange, in case some of our skillful domestic chemists may find out for themselves the method of manufacture which is held a secret by the lime-juice biscuit makers in England. The value of lime juice as a medicinal agent and also as an article of daily diet being now so fully recognized, it becomes a matter of importance that it should be obtainable in a convenient form, agreeable to the taste, and also safe for transport. This object has been accomplished in a satisfactory manner by the production of lime-juice fruit biscuits, which are manufactured under a patented process recently discovered for the preservation of the juices of fruits in their fresh state; they contain the equivalent of 40% of fresh lime juice, condensed in volume, but unchanged in other respects as to its natural condition. The condensation of the juice is effected by the elimination of the greater part of its constitutional water, at a temperature of about 100° Fahr.; by means of scientific preparation the lime juice of the biscuit preserves its original anti-scorbutic efficiency in even concentrated degree. Moreover, its associate compounds co-operate in this protecting influence, at the same time that they give an alimentary character to the product. The lime-fruit juice biscuit, therefore, is not only a specific against scurvy and a purifier of the blood, but a highly nutritious food for general use as a part of the daily diet. For summer use they will be found very grateful either dry or dipped in water and then eaten, alleviating the thirst, while at the same time serving as an agreeable nourishment.

A NEW POISON FOR RATS AND MICE.—At the Zootechnical Institute, in connection with the Royal Agricultural Academy at Proskau, a series of experiments has been carried out upon the comparative activity or inactivity of the various poisons most commonly employed for the destruction of rats, mice, and other rodents. The result of these are now published by the director of the Institute, Dr. Crampe. Of all the materials experimented with, the most efficacious proved to be precipitated carbonate of baryta. This occurs as a heavy, fine, white powder, devoid of taste or smell, and can be purchased at any ordinary drug store. In the experiments of Proskau, a portion of it was mixed with four times its weight of sound barley meal, and made into a stiff paste with water, and small pellets of the soft cake introduced into the holes of rats, house mice and field mice. One great advantage of this preparation is that the smallest quantity of it proves fatal. Further, it appears to cause immediate and complete paralysis of the hind extremities, so that it may be assumed that mice eating of it in their holes will die within them, and so not prove destructive in their turn to domesticated animals that might otherwise devour the carcasses. It was found in practice that neither fowls nor pigeons would touch the paste, either in its soft state or when hardened by the sun, so that its employment is probably free from danger to the occupants of the poultry yard. Some rabbits on the other hand, that got access to the paste, ate heartily of it, and paid the penalty with their lives.

KILLING CLOTHES MOTHS.—Prof. C. V. Riley, United States Entomologist, gives the following advice for killing clothes moths: The early days of June should herald vigorous and exterminating warfare against these subtle pests. Closets, wardrobes, all receptacles for clothing, should be emptied and laid open, their contents thoroughly exposed to light and air, and well brushed and shaken before being replaced. In old houses much infested with moths, all cracks in floors, wainscots, shelves, or furniture should be brushed over with spirits of turpentine. Camphor or tobacco should be placed among all garments, furs, plumes, etc., when laid aside for the summer. To secure cloth linings of carriages from the attacks of moths, sponge them on both sides with a solution of corrosive sublimate of mercury in alcohol, made just strong enough not to leave a white mark on a black leather. Moths may be killed by fumigating the article containing them with tobacco or sulphur, or by putting it, if practicable, into an oven heated to about 150° Fahr.

VENTILATION OF CUPBOARDS.—The ventilation of cupboards is one of those minor matters that are frequently overlooked in the erection of houses, while the want of a thorough draft is apt to make itself unpleasantly apparent to the smell. The remedy of the defect is however, very simple; if possible, have perforations made through the back wall of the closet, and a few in the door; when the wall of the closet cannot be perforated, bore holes freely on the top and bottom. To prevent dampness, with the accompanying unpleasantness and injurious effects of mildew in cupboards, a tray of quicklime should be kept, and changed from time to time as the lime becomes slacked. This remedy will also be found useful in safes or muniment rooms, the damp air of which is often destructive to valuable deeds and other contents.



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G. H. STRONG

SAN FRANCISCO:

Saturday, November 30, 1878.

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The Week.

The air is redolent of the fragrance of brown-roasting turkey and steaming mince pies. From a million ovens the incense of Thanksgiving cheer ascends, symbolic of the peace and prosperity which reign in many homes in this land of the eagle. For the day at least the turkey is the national bird. But while this day finds us in the midst of the joys of peace and quiet, there comes from the antipodes the harsh clamor of war and devastation. England hurries again to the Asiatic conflict and the Ameer of Afghanistan retires to his inner stronghold to summon strength to meet the onset of India's conquerors. Russia and other rival powers in Europe watch with their hands upon their swords, and the "peace congress" again postpones the date when swords shall be beaten "into plowshares and spears into pruning hooks." None can foretell the events which the next few months will bring to light, but the fear of peace lovers is that again "man's inhumanity to man" will make "countless thousands mourn." Events thus furnish a fitting thought for Thanksgiving week, for what are the hardships which oppress us if compared with the ruin and suffering which accrue from invasion, both to the invader and the invaded. Such evils as have crept upon us are of our own making and wise and resolute action will subdue them, but the scourge of war permits no such bloodless revolutions as are ours to make. It is indeed a fit theme for thanksgiving that of the evils visiting mankind ours are the least and the easiest to overcome.

Market Fairs.

One of our contributors recently proposed holding horse markets at different centrally located points in the State, where, at stated times, those desiring to buy or sell animals could congregate and act to mutual advantage. The suggestion is a very good one and a thoroughly practical one, if we may judge by the experience of some older countries. The advantage to the buyer of having a large lot of animals from which to select those that might suit him, and the advantage to the seller of meeting a number of well-disposed purchasers are too plain for argument. There is much time wasted, as things are now, in vain journeys here and there to find animals which can be bought; and much value is often sacrificed by the seller because his necessity compels him to sell to those who will buy only for speculation and not to answer their own needs, and consequently will not buy at all except at a very low price. We have in mind now the case of a large San Joaquin farmer last summer who desired a lot of mules to set at work plowing summer-fallow. He spent several days in chasing about after mules which he could hear of, and then only secured a part of the number he desired. This could be greatly remedied, as our correspondent suggests, if there were market fairs held at central points at several times in the year when farmers are generally obliged to recruit or increase their numbers of working animals. If it were generally understood that at a certain time, at a stated place, there would be a market fair, farmers from all around would be present, either as sellers or purchasers; breeders could show their stock to good advantage and mule importers would naturally time their importations so as to strike a general market. Transfers could be made at little cost of time and travel, and the general business of the farm would be facilitated. Prices would naturally adapt themselves to the demand and, as supplies of such material are generally abundant wherever a demand is prospective, purchasers would be relieved from picking up scattering animals at twice their value because they must have them at any price.

The experience of older countries is in favor of such modes of trade, not only with working stock, but with meat and breeding stock. The market fairs in England and on the continent of Europe are among the best attended local meetings. Everyone knows just when they will be held, and both sellers and buyers calculate accordingly. If it is a horse fair, everything is in sight of the purchaser from a pony to a heavy draft horse, and all can choose according to their needs. A method of direct trade is put in practice which is of benefit both to those who sell and those who buy. In England they have horse fairs and cattle fairs, produce fairs, and even fairs for the hiring of farm hands, all of which, so far as we have heard, are of advantage to all concerned.

Although experience abroad is in favor of bringing sellers and purchasers together in this way, and though reason commends its adoption here, it is a matter which cannot be put in practice at a moment's notice. All departures from established usages have to proceed slowly at first. The question would be whose business is it to take up the proposition and put it in practice. It seems to us that it would be within the province of the managers of the different local agricultural societies. They have grounds and buildings suitable for the purpose, and these are located at points central to considerable areas of country. They could discuss the proposition, decide upon the times in the year when there would be naturally the greatest demand for working animals and then advertise generally that at an appointed time there would be held a market fair for the sale and purchase of farm stock. A small fee might be collected of each man placing animals upon sale, and thus the expenses of the meeting could be defrayed. It would not require much expense either of time or money to set the movement in progress, and the general benefit and accommodation would be great.

We believe the market fairs would soon have a success, and they would exert a wholesome influence in building up better local markets for all kinds of produce. A thriving local market is one of the best trade blessings to the producer. As things are now, he is largely dependent upon the strolling buyer or agent and is forced to sell without proper knowledge of

the demand which may really exist for the class of material which he has to sell. If the interior producer does not trust to the visiting buyer, he is forced to consign to the city agent, and thus many animals are sold for a song in the city and resold at a larger advance to be sent back, perhaps, within a few miles of the place they were originally shipped from. This is all wrong. Nine-tenths of the profit on the animal or the article go to some one not at all concerned in the production, and the result often is that the producer gets too little and real user pays too much. Our voice is always in favor of strengthening and promoting local markets and a transfer of commodities with as little trade friction as possible. Local market fairs would be a great benefit to the interior, and we hope the agricultural societies will do something to build them up. Let them begin with horse fairs, if you please. When and where shall we announce the holding of the first one?

Barriers to the Coast Sands.

We have from time to time given paragraphs concerning the erection of barriers to the shifting sands of the seashore, as this is a problem which interests many of our coast readers. As has been stated before, the best results have been attained by securing a growth of shrub or tree, but even to accomplish this there has been found a need for artificial aids while the trees are getting their start. In Europe and on the Atlantic shore, good success has been attained by planting the maritime pine, but whether this or some tree indigenous to our coast should be employed, the process of planting and protecting could be similar. Official reports say that under the patronage of the French government, the planting of the maritime pine along the Atlantic coast of Gascony, has for many years been perseveringly continued, and now cover over 100,000 acres in the single district between the rivers Adour and Gironde. Not only has this wide area been reclaimed and made productive soil, but a still greater extent of fertile land has been rescued from the destruction threatened by the advancing sand hills.

In planting the dunes, a barrier along the shore was found necessary at first to protect the young trees from the rolling sands, which otherwise would bury them. A double line of paling was erected parallel to the shore, and at 100 meters from high-water mark—the second line being a 100 meters further inland. This paling is made of planks, sharpened at the lower end, and driven into the sand. Spaces enough to pass through to bank up equally on both sides, and relieve somewhat the force of the wind by allowing it to pass through these openings. As the paling is covered by the sands the planks are raised one at a time. A movable frame with a long lever, and mounted on runners, so that it can be slid along the top of the fence, and having pinchers and a chain, is easily carried and operated by one man.

The total cost of planting and protecting the pines has sometimes been as much as \$40 per acre. The timber of this plantation has long been a source of profit, affording both resin and wood. France now draws an annual revenue of 130,000 francs from the resinous products of these forests. But in this case the greater profit comes from the consequent protection of the adjoining country from the encroaching sands, which had formerly sterilized fertile regions and buried thriving villages. M. Samonias says that "in all France nearly 1,000,000 acres (400,000 hectares) of desolate lands, supposed to be doomed to everlasting sterility, have been reclaimed, and these savage deserts are now stocked with maritime pines which will become for the country a fruitful source of wealth, and supply some day the wants of the whole of France."

ON FILE.—"Window Gardening," G. H.; "The Peustemon," W. C. L. D.; "Carp Culture," L. D.; "Ashes for Potatoes, etc.," C. F. Y.; "Los Angeles Fair," J. H. S.; "Notes on New Plants," G. H.; "Fresno County," E. K.; "Notes from San Jose."

OUR SOUTHERN CONTEMPORARY.—The Southern California Horticulturist enters its second volume with flying colors. Its managers have good reason to be satisfied with their first year's work.

A typographical error last week made our article "Artesian Wells," No. 7, instead of No. 6,

QUERIES AND REPLIES.

A Citrus Family Fair.

EDITORS PRESS:—Our regular fairs are over, and inasmuch as the orange was not ripe, no good competition could be gotten up in any of our fairs on the orange. I would like to see an orange competition. Let the orange growers of the northern counties, the foothills, the bay counties, and all, show their products. There need be no considerable expense attached to it. Let a committee of judges be chosen, a time suitable to the ripening of the orange be set, packages exhibited by numbers, so as to obviate any local prejudice that might exist; and let's hear from the orange direct. Can't you bring it about?—Geo. KAY MILLER, Los Nietos, Los Angeles Co.

The idea is a capital one, and one which we should like to see embodied in a proposition fixing outlines and details for the proposed exhibition. It should be planned wisely, for there are many things of great importance to growers which can be brought to light. Our querist mentions the fair to decide the question of superiority of fruit produced in the different regions. This would of course be an interesting point; and if the fair were maintained from year to year we should have a contest for superiority between different growers, which would give new stimulus to the search for the best varieties of the fruit and the most successful methods of cultivation. This would result in the improvement of the product generally.

Although that part of our State which can produce the best oranges should be known and should have due credit for its achievements, there are other questions of local moment of more importance than the mere contest for a premium in a fair. A fair for the citrus family would bring to a focus information which will become of great value if the culture of the fruit should spread wide, as it now promises. Very much of future profits will depend upon the times in the year at which the fruit from different regions will be ready for the market. There is reason to believe now that the ripening of the orange in different parts will be such that the available supplies will be well distributed through the year, and thus better prices will be gained by all growers. We were talking the other day with Mr. C. M. Silva, of New Castle, Placer county, a large fruit-grower, and he assured us that, so far as the orange had been tested in his section, it promised to thrive well and to ripen so early, that the fruit might be well disposed of before the market was claimed by the shipments from the splendid groves of Los Angeles. He noticed, too, that while he left the oranges at his place well yellowed, he found the fruit around San Jose still green. If Mr. Silva's observation should be approved by general experience it will be a very fortunate feature of orange production in this State. If the Sierra foothills prove as well adapted to orange culture as they now promise, it will be well for all concerned to have them ripe and out of the way early. We think a fair organization would be likely to draw out information on this point, and would fix the schedule of ripening not only for the foothills, but for Sonoma, Solano, the Sacramento and San Joaquin valleys—in fact for all regions where orange culture is now being tested.

Another point on which a fair would find field for work would be the revision of the nomenclature of the fruit. Our Florida friends have been working at this matter, and it certainly needs examination in this State. New varieties and names are continually being claimed by growers, and there should be some central recognized authority, like that vested in a competent committee, which could examine claims and decide upon their title to distinctive names.

These are a few points which are jotted down hastily, in connection with correspondent's proposition. There are doubtless others of no less importance, such as gaining statistics of production, and the systematic effort to place our fruit upon distant markets, and the like. All these are worthy of discussion, and we invite our readers to express their views, and to propose methods and detail for setting the proposed movement upon foot. There could be no agricultural exhibition more generally and popularly interesting than a citrus fair, and none which could be turned to better account by our producing interests.

Artesian Wells.—No. 7.

Drilling Tools.

Fig. 2 represents a wedge-bit. This bit weighs 100 pounds, and contains 40 pounds of English cast-steel. When it is used, a reamer (Fig. 3) must be employed to keep the hole round and straight. A Z-bit serves the purpose of both drill and reamer. Fig. 4 shows a sand-pump.

Fig. 5 represents at work an improved well-drilling and prospecting machine. The derrick ordinarily used is supplanted by a mast and frame, as shown. The drill is attached to a rope. A $\frac{1}{4}$ -inch hawser-laid rope is used in boring to a depth of about 200 feet. Wire cable, $\frac{3}{8}$ -inch or $\frac{1}{2}$ -inch, may be used for greater depths. The sand-pump requires only $\frac{1}{2}$ -inch rope. The rope passes up from the hole over a pulley at the top of the mast, reaches down to and passes under the sheave on the inclined lever, shown as a diagonal of frame. From the sheave, the rope passes under a roller at the foot of the mast, and then up over the large drum or rope-spool. The revolution of this spool controls the lowering and raising of the drill. When the latter is to be lowered, the operator jerks the rope, which, in the figure, is shown as held in the right hand. The jerk pulls away the pall from the ratchet-wheel, and allows the latter to revolve as many notches as the operator wishes. This wheel in turn controls the spool, which unwinds the rope when the ratchet is free. The churning motion of the drill is given by the raising and lowering of the inclined lever. The lever acts exactly as a big treadle, on a grindstone for instance, the revolving arm taking the place of the foot of the grinder. To draw the drill up, remove the rope-clamp the left hand is shown as holding, move a slide on the left side of the machine (not shown in the cut) with the foot, and the lever latch will hold the lever down. Then, with the left hand, placed on the small lever (just below the elbow of the left arm); throw the clutch in gear, thus connecting the rope-spool by cog-wheels with the axle on which the revolving arm on the right turns. This axle, continuing to turn the spool or drum, winds up the rope. The sand-pump rope is shown at the small pulley, half way up the mast. It passes down and is wound upon a reel, shown near the center of the frame. This reel is revolved by a friction belt, which is controlled by the treadle lever, shown near the left foot of the operator.

The power to run the whole machine is furnished by one or two horses. The horse-power is connected with the machine by means of a tumbling-rod, as shown. It is said that two horses and one man are all that are needed to do all the work; and the operator need not leave his seat, except to empty the sand-pump, and to unscrew or to remove the drill-bit, etc. These changes can be made without stopping the horses.

The portability of the machine is greatly added to by the hinge, shown about five feet up the mast, which allows of the latter's being folded down upon the frame.

Directions for Starting the Drill.

The following directions for using this machine contain much practical information applicable to boring with any apparatus. Start the drill slowly and carefully. A man or boy must stand at the drill to turn it around a little each time it is raised, so the drill will not strike twice in the same position. Before starting, be sure that the bit and rods are tightly screwed together by means of a wooden lever inserted between the handles of the wrenches. This is a very important point and should not be neglected. Drill with a tight rope; do not let out too fast, but drill on what is called "the spring of the rope;" otherwise, the hole will not be straight. Keep three feet of water in the hole, all the time, while drilling. In many cases it is not necessary to pour water in the hole after sinking 20 or 30 feet, as some water is often found at that depth. As soon as the drill has worked down 20 or 24 inches, let the lever latch slip, which will stop and hold the main lever down, which stops the churning motion of the drill; then throw the clutch in gear and draw the drill out; then put in the sand-pump and churn it up and down by hand four or six inches about 25 times, when it will be filled with the chippings of rocks, bear down on the friction belt lever and raise the sand-pump out, empty it (see, each time, that the leather valve at bot-

tom of sand-pump is clear of all small pieces of rock or mud), repeat this operation five or six times or until all the hole is cleared of the chippings or other sediment, then lower the drill down to within 18 inches of the bottom of the hole. Push the lever latch back and drill down

is released, and the drill-rod and arm fall together. In falling, the arm ceases to clamp the rod which falls freely, allowing the drill to strike a full blow. The drill can be made to strike 50 or 60 times per minute. The disk or wheel represented in the figure is 28 inches in

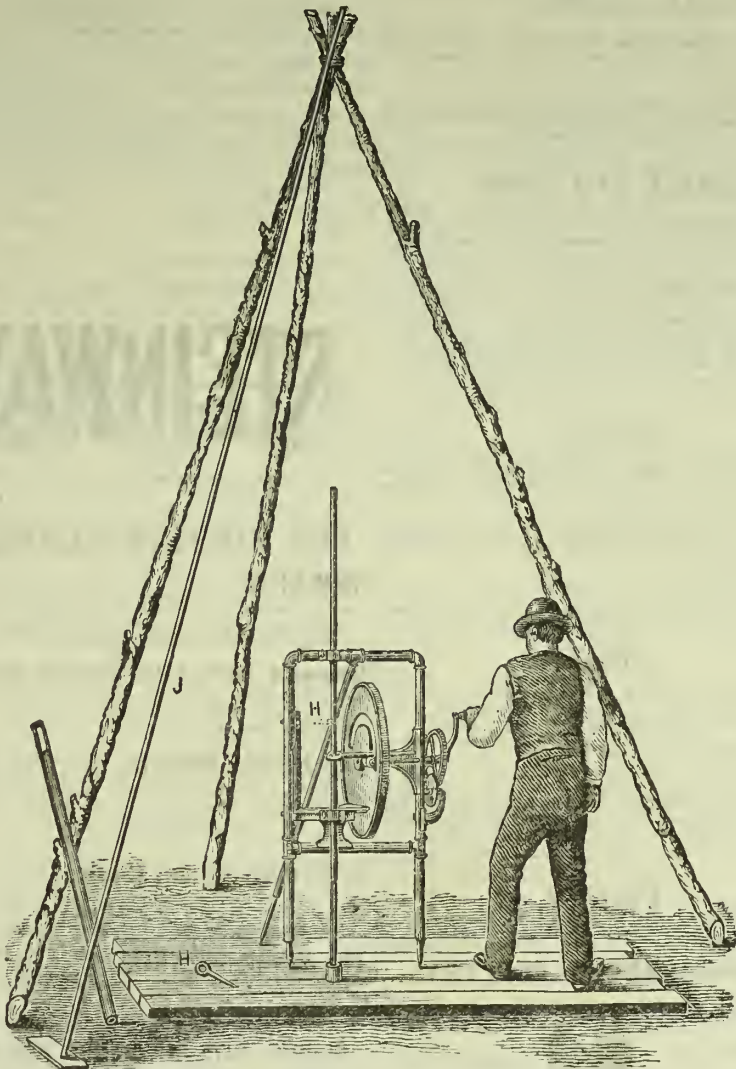


FIG. 1. MACHINE FOR BORING TEST HOLES.

20 inches farther as before. Don't stop until 10, 20 or 30 feet of water is found, or until it flows above the surface, if you want a flowing well. The drilling can be continued just as well, if there is 100 or 200 feet of water in the well.

diameter, and the slot made so that the drill is raised 14 inches every revolution. The drill is raised from a deep hole by placing the ring or arm H, at the dotted line, to catch and hold the drill as it is being raised, by the same



FIG. 2. Drill.



FIG. 3. Reamer.

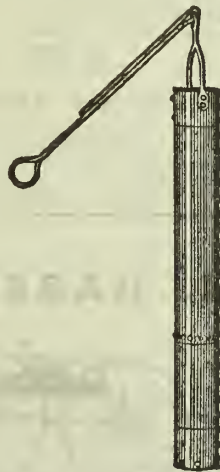


FIG. 4. Sand Pump.

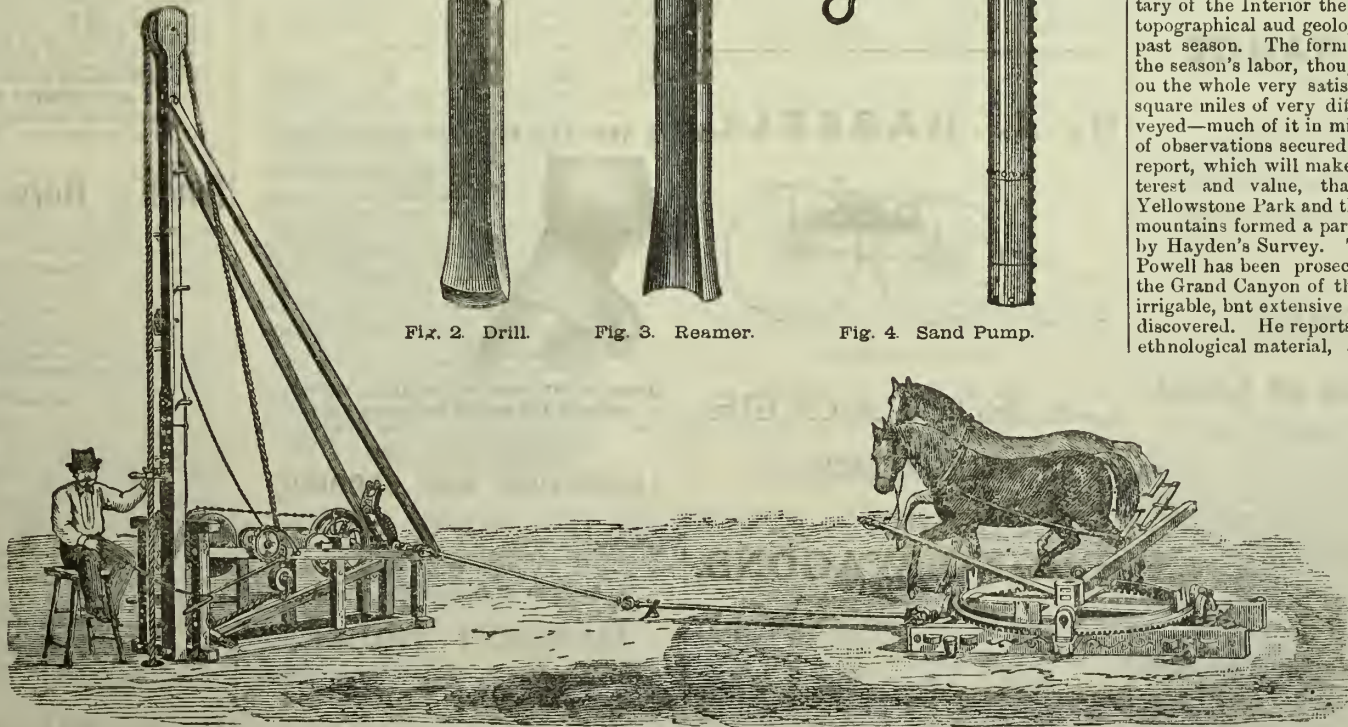


FIG. 5. IMPROVED WELL DRILLING AND PROSPECTING MACHINE.

Fig. 1 represents a drilling machine as used for sinking test holes for minerals, or for boring wells. As the large disk or wheel is rotated, the steel arm connecting it with the drill-rod is carried upward. The arm in being raised, clamps the drill-rod, and carries the latter up with it. As the arm passes over the center of the disk it turns the drill-rod one-fifth of a revolution. When the arm is directly over the shaft on which the large disk revolves, the arm

motion that is used in drilling. The poles of tripod should be 25 feet long, of common rough poles. They are used to rest the drill-rods against after they are drawn up and unscrewed. This saves the trouble of laying them down on the ground and raising them up again. J is two gas-pipe drill-rods 15 feet long, screwed together in the middle. The screw couplings welded in each end are steel. I is a sand-pump.

The tools represented by the foregoing cuts have been patented, and the cuts are copyrighted, by Charles D. Pierce, manager of the Pierce Well-Excavator Company, 4206 Elm Avenue, Philadelphia, Pa.

It is expected that an agent will soon be on this coast, introducing the machinery illustrated in the last two articles.

Rate of Boring.

Under this head nothing can be better than to quote an extract made by Spon* from Andre: "There are probably no engineering operations in which the rate of progress is so variable as it is in that of boring. That such must necessarily be the case, will be obvious when we bear in mind that the strata composing the earth's crust consist of very different materials; that these materials are mingled in very different proportions, and that they have in different parts been subjected to the action of very different agencies, operating with very different degrees of intensity. Hence it arises, not only that some kinds of rock require a much longer time to bore through than others, but also that the length of time may change within a short horizontal distance. Thus it is utterly impossible to predicate concerning the length of time which a boring in an unknown district may occupy, and only a rough approximation can be arrived at in the case of localities whose geological constitution has been generally determined. Such an approximation may, however, be attained to, and it is useful in estimating the probable cost; and to attain the same end, for unknown localities, an average may be taken of the time required in districts of a similar geological character. The following, which are given for this purpose, are the averages of a great number of borings, executed under various conditions by the ordinary methods. The progress indicated represents that made in one day of 11 hours:

- "1. Tertiary and cretaceous strata, to a depth of 100 yards, average progress 1 ft. 8 in.
- "2. Cretaceous strata, without flints, to a depth of 250 yards—2 ft. 1 in.
- "3. Cretaceous strata with flints, 250 yards—1 ft. 4 in.
- "4. New red sandstone, 250 yards—1 ft. 10 in.
- "5. New red sandstone, 500 yards—1 ft. 5 in.
- "6. Permian strata, 250 yards—2 ft.
- "7. Coal measures, 200 yards—2 ft. 3 in.
- "8. Coal measures, 400 yards—1 ft. 8 in.
- "General average, 275 yards; progress, 1 ft. 9 in.

"Should hard limestone or igneous rock be met with, the rate of progress may be less than half the above general average."

These calculations may be of little service in an entirely new country, but they may serve to impress upon the minds of those engaged in boring, the importance of keeping accurate accounts of the wells bored. The data so gathered may prove of inestimable value to practical well borers, as well as to geologists.

We have made inquiries as to the charges for boring, made by contractors. Their charges are so irregular, that any attempt at general calculation would be utterly futile.

*The Practice of Sinking and Boring Wells. Ernest Spon, London.

THE TERRITORIAL SURVEYS.—Prof. Hayden and Major Powell have reported to the Secretary of the Interior the general results of their topographical and geological surveys during the past season. The former says: The results of the season's labor, though a short one, has been on the whole very satisfactory. About 12,000 square miles of very difficult country was surveyed—much of it in minute detail—and a mass of observations secured for the twelfth annual report, which will make it of more general interest and value, than any preceding. The Yellowstone Park and the Wind River range of mountains formed a part of the region covered by Hayden's Survey. The work under Major Powell has been prosecuted south and east of the Grand Canyon of the Colorado river. Little irrigable, but extensive grazing lands have been discovered. He reports having collected much ethnological material, and states that he has

nearly completed a map showing the distribution of the various Indian tribes within our present boundaries, at dates when they were first known to Europeans.

HOW GALVESTON ESCAPED.—The people of Galveston have proved that the way to keep yellow fever out of a place is to keep it clean and drained. Although that city was formerly subject to a severe visitation of the plague once in three or four

years, it has had none for 11 years past, owing to the means taken after the great epidemic of 1867 to put the town in good sanitary condition. This experience is of value with regard to other diseases than the yellow fever, and should be duly heeded throughout the country both in cities, villages and country homes.

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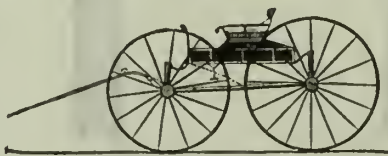
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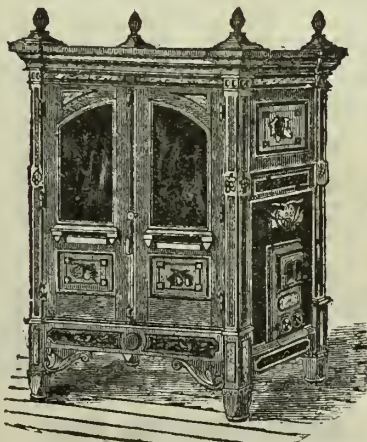
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SEEDS OF EVERY DESCRIPTION, BULBS AND BULBOUS PLANTS, AND A GENERAL VARIETY OF GARDEN AND HOUSE PLANTS.

Our NEW CATALOGUE now ready for mailing, Send for it.

Cut Flowers, Bouquets and Funeral Work furnished on short notice and in the best style.

E. J. BOWEN'S SEEDS.

A General Assortment of

GARDEN and FLOWER SEEDS

Neatly put up in papers and packages with description of variety, general directions for cultivation on each paper, and bearing my name, are for sale by responsible merchants throughout the Pacific States and Territories. My stock of

CLOVER, GRASS,

VEGETABLE, and Miscellaneous SEEDS, in bulk, is also large and complete.

E. J. BOWEN,

Seed Merchant and Importer,

815 & 817 Sansome St., San Francisco.

SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses.
RED CLOVER, FRENCH WHITE CLOVER, CHOICE CALIFORNIA ALFALFA, Etc.

Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

B. F. WELLINGTON,

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GRAPE DRIERS, ATTENTION!

Parties who cannot perfectly cure their Grapes by the sun can make liberal arrangements to either sell them or have them cured on my Driers, by applying to

GEO. A. DEITZ,

No. 81 J Street, Sacramento, California.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, November 27th, 1878.

The market is still quiet. Wheat is unchanged in price, but holders are wisely firm and offerings are small. All things point to an improvement of prices with the new year, and holders of Wheat realize it.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday....	9s	6d	9s	10d	9s	9d	10s	2d
Friday.....	9s	6d	9s	10d	9s	10d	10s	2d
Saturday....	9s	6d	9s	10d	9s	10d	10s	2d
Sunday.....	9s	6d	9s	10d	9s	10d	10s	2d
Tuesday....	9s	6d	9s	10d	9s	10d	10s	2d
Wednesday..	9s	6d	9s	10d	9s	10d	10s	2d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1876.....	9s	6d	9s	10d	9s	9d	10s	1d
1877.....	12s	8d	12s	10d	12s	10d	13s	3d
1878.....	9s	6d	9s	10d	9s	10d	10s	2d

The Foreign Review.

LONDON, Nov. 26.—The *Mark Lane Express* says: Supplies of home-grown Wheat continue very moderate both in Mark Lane and the Provincial markets; but taking all things into consideration, the present aspect of trade appears to be sufficiently sound to justify farmers in withholding their products as long as possible, and the continuance of light offerings indicates an expectation of better prices later on. Business has been restricted, owing to the impaired condition of most samples, it having been quite impossible to thresh with satisfactory results. The absence of speculation has been largely felt in the grain trade, and the spirit of commercial enterprise has been broken by the severe financial vicissitudes through which the general trade of the country is passing; but brighter days for the merchant and agriculturist may be looked for with the New Year.

Freights and Charters.

The *Call* says: No improvement in the situation. The vessels in air loading slowly, and shippers making no new engagements. The nominal rate for grain to Liverpool is 35@37s 6d.

Eastern Grain Markets.

NEW YORK, Nov. 29.—The grain trade during the week has been rather moderate, the rise in the prices of Wheat, through speculation at Chicago, having checked exports to England, though the Continental movement has been fair. The French demand has surprised everybody. This trade is now in different hands, being prosecuted with a success not surpassed by that of England. The bulk of shipments are made at Havre and Antwerp, but there is scarcely a French port accessible to seagoing vessels to which exports have not been made, the aggregate movement to France since its inception reaching upwards of 6,000,000 bushels. Prices have advanced 2@3c during the week, and with higher transportation charges after the close of navigation, still higher figures are looked for. The total export of the past week from all Atlantic ports, including Montreal, reaches over eight and a half million bushels, or about a million bushels in excess of the previous four weeks. New No. 2 Spring is worth 96c@\$1.10 bushel, and shipping grades of Winter \$1@1.10. The visible supply of Wheat is a little less than last week, or about 17,000,000 bushels. Corn and minor cereals remain steady.

CHICAGO, Nov. 23.—The Wheat market has been considerably disturbed by stories of a combination to raise prices from 80c to \$1 or \$1.25, but nothing is definitely known beyond the facts that there has been a moderate rise in prices, that grain has been coming in very fast, and that it has generally been taken, the last days of the week, at a trifling advance. Nobody here seems certain of the future, and trading in options has been on that account greatly restricted. Sales for December were 81@85c. Corn has experienced a brief rise and a sudden decline at the close of the week's business. December sold at 31@33c. Oats were dull, but rather firmer. December sold at 20@20½c, cash. Rye went from 44½@45c, and Barley 91@95c. Provisions have been only moderately active and much lower. Sales: Pork for December, \$6.50@6.82½c; Lard, \$5.75@5.87½c. Closing cash prices: Wheat, 84½c; Corn 31½c; Oats, 20½@20¾c; Rye, 45c; Barley, 95c; Pork, \$6.65 for old, \$8 for new; Lard, \$5.75.

Eastern Wool Markets.

NEW YORK, Nov. 23.—The Wool market continues in a depressed condition, with current rates weakly supported. Ohio X and XX are offered at 34@35c. California and Texas are correspondingly lower. London sales of Colonial opened the 19th inst. The prices obtained were five per cent. less than September rates, or say 13d for Port Philip, shrinking 55%, and 12d for New Zealand, shrinking 56%. Liverpool sales of East India also opened on the 19th inst. Offerings were unusually large—say 13,000 to 20,000 bales. A decline is cabled of one

farthing to 3d. Among the sales reported during the week are 132,000 lbs Spring California, at 17@24c; 70,000 lbs Fall do, 10@21c; 5,000 lbs Scoured do, 50c; 3,000 lbs Valley Oregon, 30c; 65,000 lbs Western do, 18½@19c; and 47,000 lbs Fall California, 3,000 lbs scoured Spring do, and 65,000 lbs Colorado—on private terms.

BOSTON, Nov. 23.—In Wool there has been a very dull feeling during the past week, and transactions have been the smallest for some months. Prices changed very little, but the tendency of the market is in favor of buyers, and trade does not look encouraging. As previously noticed, manufacturers are purchasing fast to their wants, and dealers are free sellers at current rates; but there is no disposition to stock up beyond immediate wants. The belief that there is a large supply of domestic wool yet to come forward, with the pressure to sell in neighboring markets, tends to impart a rather unsettled tone to prices at the close. Sales embrace Ohio X, XX, XXX and No. 1, at 34½@38c; Western and other fleeces, 28@34c; combed and delaine fleeces, 35@42c; low unwashed combed, 25c; unwashed fleeces, 23½@26c; Mission, 25c; Texas, 15@27c; Territory, 12@28c; scoured, 42@65c; tub-washed, 34@37c; super and X pulled, 28@41c. In California there was a noticeable falling off from the large transactions of last week, sales comprising only 227,000 lbs at 18@25c for Spring, and 12½@23½c for Fall. The total sales of domestic for the week amount to 880,500 lbs.

Receipts of Domestic Produce.

The following table shows the S. F. receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Nov. 6.	WEEK. Nov. 13.	WEEK. Nov. 20.	WEEK. Nov. 27.
Flour, quartersacks..	30,172	58,506	127,964	47,503
Wheat, centals.....	178,632	187,424	144,304	72,993
Barley, centals.....	68,891	58,544	21,662	16,088
Beans, sacks.....	10,267	18,755	12,567	4,705
Corn, centals.....	5,214	10,040	9,925	7,956
Oats, centals.....	7,376	8,720	23,014	9,976
Potatoes, sacks.....	20,134	15,897	24,552	20,466
Onions, sacks.....	498	933	771	1,229
Wool, bales.....	3,128	2,011	1,341	506
Hops, bales.....	253	257	534	281
Hay, bales.....	1,516	1,178	752	1,186

BAGS—There is nothing doing and prices are at a standstill. Standard Wheat Bags are still 9@9½, nominal.

BARLEY—There is but little Barley offered and prices are maintained with a firm feeling. Exports to foreign countries continue, but shipments are small.

CORN—Corn sustains a farther decline and sales are small. Rates are as given in our table below.

DAIRY PRODUCE—Dealers report the trade quiet. Receipts of fresh Butter are quite ample generally, although more strictly fine could be disposed of to advantage. The season has been so open so far that there has been no barrier to shipments. Doubtless a storm would rise prices on fresh roll by holding back supplies.

EGGS—Eggs are in rather better disposition this week, and choice fresh reach 45c in some cases.

FEED—Choice Wheat Hay scores another slight advance and reaches \$16.50 for fine lots. The general Hay market is quiet. There is no notable change in ground feeds.

FRUIT—The large supply of Apples still reduces values, and prices are not half those obtained a year ago. Lemons and Oranges are a point lower. Pineapples and Strawberries have nearly doubled last week's rates.

FRESH MEAT—Beef is firmer, and best selections command an advance. Mutton is unchanged. Pork shades down still another small fraction, because of the large amount offered and cheapness at the East.

HOPS—There is some talk but little trade, and prices are unchanged. Emmet Wells, under date of November 15th, reports a better feeling in New York, as follows:

The call for nearly 1,300 bales for export to London this week has given impetus to the trade and caused a much better feeling. Prices remain steady at late quotations, though it is believed that if the present lively export movement continues more money will soon be asked for choice Hops, which are anything but plenty. Holders of low and medium grades, we think, will do well to take advantage of the present activity, and not hold for an advance, for this class of goods largely predominate, both here and abroad, and there is little or no chance of doing better by holding. Holders of choice export Hops, on the other hand, stand a good show of getting more money than the present currency, and can afford to be a little independent and not force their Hops upon the market now. The scarcity of fine Hops, the world over, is sufficient to ensure better prices than now rule. Consumers who can't see it in this light now, probably will see it as the season advances, for late advices from London fully confirm the early reports of a shortage of prime Hops of English growth, and the high prices asked for German Hops precludes the possibility of England getting enough from that country to make up her own deficiency; America, therefore, must come to the rescue. New Pacific Coast Hops have changed hands this week at from 12c to 15c ½ lb.

OATS—Choice Oats are still in demand and full prices obtained. Dark Feed, on the other hand, is plenty, and some sales are as low as \$1 per ctl. Exports are in progress to Australia.

Sales: 150 sds bright Feed, \$1.50; 400 sds good Feed, \$1.45.

ONIONS—Rates are wholly unchanged, \$2 to \$1 per ctl being the range.

POTATOES—The market is quiet and sales at last week's rates.

PROVISIONS—The market for Meat products is quite active, and prices a shade lower all round, especially on Eastern Meats, which are arriving freely and somewhat in excess of the requirements of the market.

VEGETABLES—We note an advance in String Beans, Egg Plant and Marrowfat Squash. Peas and Tomatoes are lower.

WHEAT—Last week's prices are still ruling. An occasional lot of choice Milling reaches \$1.80. The market is dull and quiet. We note sales: 400 ctls choice Milling at \$1.75; 700 do, good Shipping at \$1.72½; 200 do, good Milling, at Oakland wharf, at \$1.70; 125 do, Coast at \$1.40; 7,000 do, Gilt Edge Milling, at Vallejo at \$1.80; 7,600 do, good Milling, at Vallejo, at \$1.72½; 11,000 do, fair Shipping, at Vallejo, at \$1.68½ ½ ctl.

WOOL—The trade is still running to a great extent on odds and ends which have been rejected by buyers earlier in the season. This brings in 9c as a price at which some sales of some poor stuff is made. We note sales: 150,000 lbs San Joaquin and Southern, 9@12½c; 60,000 Oregon, 17c; 50,000 Northern California, 16@18c.

DOMESTIC PRODUCE.

[WHOLESALE.]

TUESDAY, November 26, 1878.	
Beans, California..	1 5/8 @ 2 1/2
Butter, Cal.....	20 @ 25
Peas.....	2 50 @ 2 60
Red.....	1 75 @ 1 80
Pink.....	1 75 @ 1 80
Shut White.....	2 32 1/2 @ 2 50
Lima.....	1 00 @ 1 25
Field Peas.....	1 00 @ 1 25
Southern.....	2 @ 2 1/2
Northern.....	3 @ 4

TUESDAY, November 26, 1878.	
California.....	4 @ 4 1/2
German.....	6 1/2 @ 7
Union City, Cal.....	2 00 @ 2 10
San Leandro.....	2 00 @ 2 10
Stockton.....	2 60 @ 2 80
Sacramento River.....	2 00 @ 2 10

TUESDAY, November 26, 1878.	
Petaluma, Cal.....	5 1/2 @ 6 00
Humboldt.....	7 1/2 @ 8 00
Cliff City, Cal.....	2 00 @ 2 10
Early Rose.....	50 @ 5 1/2
Half Moon Bay.....	60 @ 6 00
Kidney.....	1 25 @ 1 50
Sweet.....	1 00 @ 1 25

TUESDAY, November 26, 1878.	
Lima, doz.....	6 00 @ 7 00
Roosters.....	4 50 @ 5 50
Broilers.....	3 50 @ 4 00
Ducks, tame.....	7 00 @ 8 00
Union City, Cal.....	3 00 @ 3 50
Geese, pair.....	2 00 @ 2 25
Wild Gray, doz.....	— @ 2 00
Turkeys.....	17 @ 18
Do, Dressed.....	20 @ 22
Snipe Eng.....	— @ 1 50
Do, Common.....	50 @ 75
Quail, doz.....	75 @ —
Rabbits.....	1 50 @ —
Hare.....	2 50 @ —

TUESDAY, November 26, 1878.	
Cal. Bacon, Hvy. lb.....	10 @ 10 1/2
Medium.....	10 1/2 @ 11
Light.....	11 @ 12
Lard.....	14 @ 15
Cal. Smoked Beef.....	14 @ 15
Ham, Cal.....	12 @ 13
Dupe's.....	14 @ 15
None Such.....	14 @ 15
Ames.....	— @ —
Whittaker.....	— @ —
Magnolia.....	13 1/2 @ 14
Reliable.....	14 1/2 @ 15

TUESDAY, November 26, 1878.	
Barley, feed, cts.....	15 @ 16
Brewing.....	15 @ 16
Chevalier.....	15 @ 16
Buckwheat.....	15 @ 16
Corn, White.....	15 @ 16
Yellow.....	15 @ 16
Small Round.....	15 @ 16
Oats.....	15 @ 16
Milling.....	15 @ 16
Rye.....	15 @ 16
Wheat, Shipping.....	15 @ 16
Milling.....	15 @ 16
Off Grades.....	15 @ 16

TUESDAY, November 26, 1878.	
Beef, 1st quality, lb.....	5 @ 6
Second.....	4 @ 5
Third.....	3 @ 4
Mutton.....	3 @ 4
Spring Lamb.....	5 @ 6
Pork, undressed.....	3 @ 4
Dressed.....	5 @ 6
Veal.....	4 @ 5
Milk Calves.....	6 @ 8
Do, choice.....	7 @ 8

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California Horse-Power

For Irrigating Purposes.
The best in the World.

No machinery,
and easily work-
ed. One horse
works two (2)
8-inch pumps,
raising water 50



feet with 5-foot stroke, at the rate of 12,000 gallons per hour. For particulars send for circulars.

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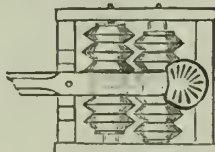
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Patented

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The Best

In the

State!

The Golden State Ground Roller

— AND —

CLOD CRUSHER!

State Rights For Sale. Manufactured at the
SACRAMENTO FOUNDRY,

Corner of Front and N Streets, Sacramento, Cal., by
WM. GUTENBERG & CO.

The Famous "Enterprise,"

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Self Regulating

WINDMILLS,

Pumps & Fixtures.

These Mills and Pumps are
reliable and always give sat-
isfaction. Simple, strong and
durable in all parts. Solid
wrought iron crank shaft with
double bearings for the crank
to work in, all turned and
run in habbitted boxes.

Positively self regulating,
with no coiling spring or springs
of any kind. No little rods,
joints, levers or balls to get
out of order, as such things
do. Mills in use six to nine years in good order now, that
have never cost one cent for repairs.

All sizes of Pumping and Power Mills. Thousands in
use. All warranted. Address for circulars and infor-
mation,

HORTON & KENNEDY,
GENERAL OFFICE AND SUPPLIES, LIVERMORE,
ALAMEDA CO., CAL. Also, Best Feed Mills for sale,
San Francisco Agency, LINFORTH, RICE
& CO., 401 Market Street.

F. ALTMAN'S



Foundry and Machine Shop.

Manufacturer of all kinds of Steam and Agricultural
Machinery.

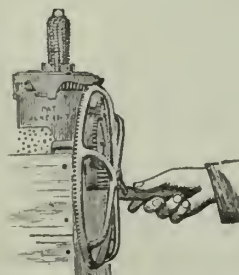
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Shears and Mould Boards always on hand.

SAN JOSE, CAL.

Peerless Corn Sheller

It is so cheap (cost-
ing only \$6), that al-
most any one can af-
ford to buy one. It is
so rapid, it will shell
almost as fast as a \$40
machine, and seven or
eight bushels per hour
is not above its capac-
ity. It weighs only 13
pounds and is simple
and durable. For par-
ticulars, address

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THE BOSS PRUNER.

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ENTIRELY NEW!

Works on a cog principle. Smallest size cuts one inch,
and largest size two inches in diameter. Has been thor-
oughly tested, and given perfect satisfaction. Sold by

GEORGE LARKIN,
Newcastle, Placer County, California

MATTESON & WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great plowing Match
in Stockton, in 1870.

This Plow is thoroughly made by practical men who
have been long in the business and know what is required
in the construction of Gang Plows. It is quickly adjusted.
Sufficient play is given so that the tongue will pass over
cradle knolls without changing the working position of the
shares. It is so constructed that the wheels themselves
govern the action of the Plow correctly. It has various
points of superiority, and can be relied upon as the best
and most desirable Gang Plow in the world. Send for
circular to

MATTESON & WILLIAMSON,
STOCKTON, CAL.



CALIFORNIA

(Patent)

WINDMILL.

Self-Regulator.

This is the cheapest and best
Windmill in the country. Has
78 fans, 10 feet in diameter.

Price, \$75.

Every mill is warranted. Be-
fore you buy, send for a cir-
cular, giving full description to

BERRY & PLACE,

Market, head of Front street, SAN FRANCISCO, Cal.



EVERY PACKAGE WARRANTED.

EVERY PACKAGE WARRANTED.

This trade-mark is registered by G. N. Milco, May 7th,
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The most wonderful discovery of the Nineteenth Century.

A California Production.

Retail price, 25 cts. and 50 cts. per package, and 25
cents for each Insufflator. These will be sent by mail on
receipt of price, either in money or stamps.

Directions for use with each package.

G. N. MILCO,

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Ask your druggist and groceryman for it.

STEWART & BUCKLEY, Agents,
513 Sansome Street, San Francisco, Cal

A Country Store Wanted.

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GLEASONVILLE, TEHAMA CO., CAL.,

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have just finished a splendid new building. It is now
ready for goods, and we will rent it on reasonable terms.
This place is in the midst of a rich farming country, where
crops have never been known to fail. The nearest stores
are from 15 to 18 miles distant.

The town of Gleasonville has a good hotel, blacksmith
and shoe shop and saloon, but no store. The storekeeper
could use from \$8,000 to \$10,000 to advantage, but can do
a good business with less. A good man with money to
command is wanted to open the store.

Address, GLEASON & MASON,
Gleasonville, Tehama County, Cal.

THEOPHILE PINARD,

Alameda Carriage Factory,

SAN JOSE, CAL.



Blacksmithing of all kinds Neatly
and Promptly done.

Horseshoeing a Specialty.

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\$1.50 to \$2 per day. \$8 to \$10 per week. Carriage at-
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YOUR NAME PRINTED on Forty Mixed Cards for
Ten Cents. STEVENS BROS., Northford, Conn.

Sacramento City.

Sacramento, the capital city of California, is centrally
located to the great and rich agricultural and mining fields
of the State. It is the second city in trade and importance
on the western side of the continent. Sacramentoans through-
out the history of California have honorably competed for a
fair share of trade, and are well noted for their indomitable
enterprise in establishing and perpetuating the growth, sub-
stantial improvement and good reputation of their CAPITAL
CITY.

PACIFIC WATER CURE

— AND —

ECLECTIC HEALTH INSTITUTE.

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M. F. CLAYTON, M. D., PROPRIETOR.

This Institution has been favorably known to the public
as a Water Cure for nearly twenty years. At the beginning
of last year it passed into the hands of the present proprietor,
who has thoroughly renovated, fitted it up and furnished it
with all the modern improvements and apparatus for the
treatment of diseases and deformity to which the human
flesh is heir. Chronic diseases receive special attention, such
as premonitory Consumption, Catarrh, Bronchitis, Rheuma-
tism, Paralysis, etc. The patients are surrounded with all
the comforts of home, with nurses of long experience and the
best medical advice in the State.

Treatment per week	\$10.00
Treatment and Board per week	\$15 to \$20
Board per week	\$4.00
Board and Lodging	\$5.00
Russian Bath	\$1.00
Eucalyptus	1.00
Sulphur, Liquid or Steam	1.00
Grindelia (sure cure for Poison Oak)	1.00
Steam	.50
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TAFT, TOTMAN & FARNSWORTH,



Mechanics' Mill Company,

L Street, between Fifth and Sixth,

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Every description of Sawing, Planing,
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All kinds of Fruit and Packing Boxes.

DOORS, SASHES AND BLINDS

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CARRY A LARGE STOCK OF CASSIMERES, DOE-
SKINS, TWEEDS, FLANNELS, BLANKETS, READY
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Generous Discount on San Francisco Prices.

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In our Tailoring Department we
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of every description, from the commonest working pants to
the finest cloth suit.

Country gentlemen, farmers and mechanics should take
notice that our facilities are really superior for furnishing
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WAGONS.

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Free. Prices of room and board reduced to
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Also, pure Suffolk hogs and pigs. Short Horn and
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Chickens for sale.

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As a horse medicine it is superior to any liniment ever
invented. For KINGBONE, SPAIN, SWEENEY, CALLOUS
LUMPS, and all old sores, apply freely so as to blister,
from three to five days in succession, and in four or five
days, if not cured, repeat as at first. SPRAINS, STIFF
JOINTS, BRUISES, WINDGALLS, and all slight ailments, apply
a small quantity so as not to blister. Saddle Sores, Cuts,
and all other sores where the skin is broken, mix the lin-
iment half and half with any kind of oil, and apply in
moderation.

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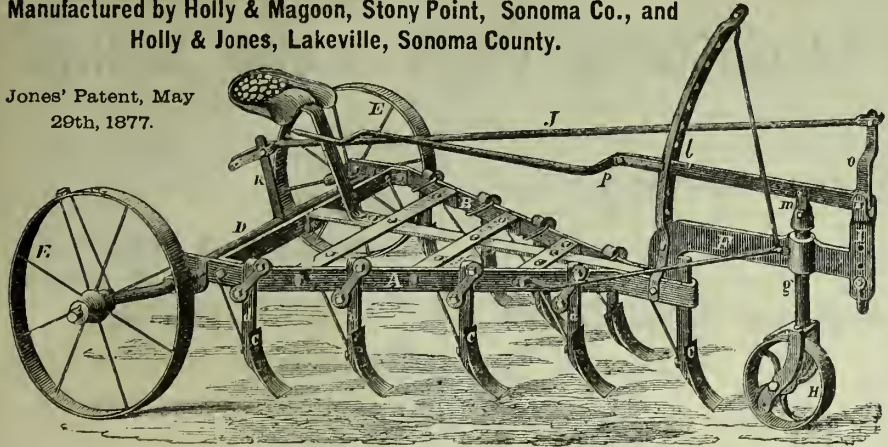
\$2 Per Gallon.

After dipping the sheep, is use-
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Jones' Patent, May
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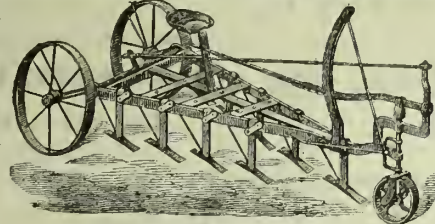
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For further information address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Francisco and Sacramento, Cal.

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DOUBLE-BOX WHEEL

Is a decided improvement, to which we wish to call the especial attention of those who would secure the best and most durable.

Our STRAIGHT CHISEL CULTIVATORS (patent applied for) are self-sharpening and made of the best cast steel, with an improved method of fastening to the standard, approaching perfection itself.





IF YOU WANT A

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THE MOST POWERFUL AND THE NEAREST PERFECTION OF ANY IN USE—ONE THAT PROTECTS ITSELF IN A GALE, WILL KEEP YOUR TANK FILLED WITH

Water Without Waste and Without Attention,

EXAMINE THE RECENT

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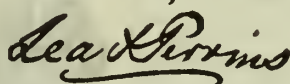
Bachelder Manufacturing Co.,

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LEA AND PERRINS' SAUCE,

which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,



which is placed on every bottle of WORCESTERSHIRE SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

To be obtained of CROSS & CO., San Francisco.

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ORANGE AND LEMON GROVES,

In Placer County, Cal.

Notice is hereby given by the owner of the BEAR RIVER, NORTH FORK and GOLD HILL DITCHES, that he will supply,

Free of Charge,

For five years, from June 1st, 1878, all the water needed to irrigate

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Provided each party claiming water under this offer has fifty or more trees in growing condition.

He will also furnish free water for the first year to irrigate Fruit Trees, Vines and Vegetables to all persons starting new places and improving the same, provided they make application in advance to

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Or to any local agent. Auburn, Placer Co., Cal.

San Francisco Shopping.

MRS. M. B. SMITH will purchase and forward goods of every description at reasonable commission. For Circulars giving full information and unexceptionable references, address her, No 200 Stockton St., San Francisco.

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Is the cheapest and best food for Hogs, being ahead of any thing in existence for that purpose. 500 to 1,000 bushels to the acre. Little trouble. No harvesting. No feeding. The Hogs will help themselves if allowed to do so. I have a limited quantity of seed to sell. Send for Circular giving full information to

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M. COOKE. R. J. COOKE.

PIONEER BOX FACTORY,

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ALL KINDS OF

Fruit & Packing Boxes Made to Order, AND IN SHOOKS.


Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY


50 Perfumed, Snowflake, Chromo, Motto, etc., CARDS, with name, 10c. G. A. SPRING, E. Wallingford, Ct.

Winchester Repeating Rifle,

MODEL 1873.



One-third size by Dr. E. H. Pardee.



The Strength of All its Parts,
The Simplicity of Its Construction,
The Rapidity of its Fire,
The Power and Accuracy of its Discharge,
The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, set 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder,

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SOLE AGENT FOR THE PACIFIC COAST.

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Bone Coal and Fertilizing Material Co.

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Pure Bone Meal, Superphosphate, Animal Fertilizers,

Bone Meal for Chicken and Stock Feed.

In order to introduce our fertilizers, and to prove that we are using nothing but pure materials, and being positive that when properly used they will double the yields of most crops, and at the same time enrich the soil, we are willing to furnish small lots, of 100 pounds and upwards, at low prices.

For Circulars, giving information concerning the use of the fertilizers on different crops, apply to or address the Company's office, No. 21 Sansome Street, San Francisco.

A. HAAS, Manager.

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MUSICAL BOXES

For Holiday, Birthday and Wedding Presents.

M. J. PAILLARD & CO.,


Manufacturers and Importers,

No. 120 Sutter St., San Francisco.

GRAND HEADQUARTERS.

HERRMANN'S HATS

ARE THE BEST!



Try one and you will Wear no other.

Fall and Winter Styles All In!

— AT —

336 Kearny St., bet. Bush and Pine,

— AND —

910 Market St., above Stockton.



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WATER WHEEL

WARRANTED BEST & CHEAPEST. Also, MILLING MACHINERY. PRICES REDUCED APR. 20, '78. Pamphlets free. OFFICE, YORK, PA.

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202 San Francisco St. Patent Ag'ts

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To Grangers and Farmers.

The undersigned is now prepared to receive and sell

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That may be consigned to him, at the HIGHEST MARKET RATES, and will open a trade direct with the consumer


Without the Intervention of Middlemen.

He also asks consumers of Hay and Grain and Stock Buyers to co-operate with him, and thus have but one commission between producer and buyer. Address

S. H. DEPUY,
Nos. 11 & 13 Bluxome St., San Francisco

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Chewing



JACKSON'S BEST

NAVY

Tobacco

Awarded highest prize at Centennial Exposition for fine chewing qualities and excellence and lasting character of sweetening and flavoring. The best tobacco ever made. As our blue strip trade-mark is closely imitated on inferior goods, see that Jackson's Best is on every plug. Sold by all dealers. Send for sample, free, to C. A. JACKSON & Co., Mrs., Petersburg, Va.

L & E. WERTHEIMER, Ag'ts, San Francisco.

Take the paper that stands by your interests.

"DAVIS" VERTICAL FEED.

(Best Sewing Machine in the World.)

— FOR —

DURING THE **\$40.** HOLIDAY SEASON.

On receipt of the above amount I will send to any address nicely packed for transportation, one new

"DAVIS VERTICAL FEED"

Lock-stitch Family Sewing Machine complete, with a long list of practical attachments and a splendidly ILLUSTRATED INSTRUCTION BOOK, showing unmistakably by wood cuts the exact position of each attachment when adjusted for different kinds of work.

Make Your Wife a Present

OF THE LIGHTEST RUNNING SHUTTLE MACHINE in the market. Entire satisfaction guaranteed to every purchaser.

MARK SHELTON, Gen'l Agent,

No. 130 Post Street, San Francisco.

P. S.—Remit by Express or Postal Money Order. At least one-half cash must accompany order; balance may be paid upon receipt of Machine C. O. D.



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THE BEST PLACE TO BUY

Razors, Shears, Pocket Knives,
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Carving Knives,

Our own manufacture, and every description of Cutlery is from the manufacturers. All our Goods Warranted the Best.

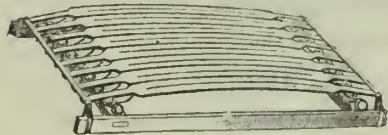
Country orders promptly attended to.

WILL & FINCK,

LEADING CUTLERS,

769 Market Street, San Francisco.

Cutlery of every description Ground and Repaired.



LATIN

EXTENSION SPRING BED.

MANUFACTORY,

1029 Market St., San Francisco,

C. B. RICHMOND, PROP'R.

Prices from \$4 to \$9, according to Size.

We Challenge the World to produce a Better, Cheaper, Simpler, more Durable or Cleaner Bed than Ours.

TO LADIES—SILK.

Substantial reasons why Ladies should

Buy California Sewing Silk.

It is made from the very best Tatlee Silk. It is warranted all it is represented to be.

It is a California production, and is made entirely by white labor, giving employment to a large number of women and girls.

The Company guarantees every spool of the following brands: California 1-ounce spools, California 1-ounce spools, the extra California 100 yards spools and California button hole twist. Should any of the above brands prove unsatisfactory, they will gladly exchange them.

Sold by all first-class dealers. Ask for CALIFORNIA SILK; take no other.

California Silk Manufacturing Co.

No. 585 Market Street, San Francisco,

R. R. YATES, AGENT.

HEMORRHOIDS OR PILES,

A treatise on their scientific treatment and radical cure, by E. J. FRAZER, M. D., San Francisco. Price, 25 cents; for sale at the bookstores and by the author at 221 Powell street. Sent by mail to any address on receipt of the price in coin, currency or postage stamps.

California Furniture Manufacturing Co.,

224 & 226 BUSH STREET, SAN FRANCISCO, CAL.

Manufacturers, Importers, Wholesale and Retail Dealers in

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LATEST STYLES AND LOWEST PRICES.



For Crippled and Deformed Persons,

Is the largest Institution of its kind on the Continent. The Medical and Surgical Staff comprises the best talent in the country. There have been more cases of human deformities successfully treated than by any similar Institution. More than 50,000 cases have been successfully treated. Diseases which are made a specialty—Curvature of the Spine, Hip Disease and all Diseases of the Joints, Crooked Limbs, Club Feet, Piles, Fistula, Nasal Catarrh and Paralysis. Send for Circulars and References to the

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IMPORTERS, WHOLESALE AND RETAIL DEALERS IN

Top and Open Phaetons, Carriages, Top and Open Rockaways, Top and Open Buggies, Jump Seat Buggies, Single Seat Business Wagons, Two Seat Country Wagons, Thorough brace Wagons, Harness, Saddlery, Whips, Blankets, Robes, Etc.

JAMES R. HILL & CO.'S CONCORD HARNESS. TOMPKIN'S MANDVILLE HARNESS. C. B. SMITH & CO.'S HARNESS.

No. 9 New Merchants' Exchange, California St.

REPOSITORY AND SALE STABLES.

Corner New Montgomery and Mission Sts.

Our Sale Stables are the largest on the Pacific Coast, having a large Amphitheater with first-class facilities for the exhibition of stock. We have ample accommodations for two hundred head of horses, and are ready to receive consignments from all parts of the country, to be cared for at reasonable rates until day of sale.

PREMIUMS TO OAT GROWERS.

I will sell to twenty subscribers of the RURAL PRESS each one pound of seed (clean) grown by me of the new "Chinese Hulls Oats" at \$1.00 per pound, and will pay to the person who raises the largest quantity in pounds the premium of \$25; to the person of the second largest quantity the sum of \$15; and to the person of the third largest quantity the sum of \$10, all in gold coin. The mode of culture free, but must be communicated to the RURAL PRESS or myself on application for the premiums. The premiums will be paid on the 1st day of November, 1879, and sent per express to the successful competitors. Each applicant has to send an affidavit signed by two witnesses before a Justice of the Peace or Notary Public, to prove statement.

G. HUNZIKER.

Cloverdale, November 13th, 1878.

WURKHEIM & CO.,

The Cheapest

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To Dairymen and Stockraisers.

OIL CAKE MEAL.

Best Feed Known for Live Stock.

We call attention to OIL CAKE MEAL, which we are now manufacturing from pure Linseed. No feed so promotes the health of animals or produces so great percentage of MILK and CREAM. The U. S. Department of Agriculture gives the following as compared with other feed, as to percentage of flesh from one hundred pounds meal: Indian Corn, 11%; Barley, ground, 13%; Oat Meal, 18%; OIL CAKE MEAL, 22%.

For MILK COWS, it increases the quality and richness of the milk, to a far greater extent than any other feed known. For BEEF CATTLE, its fattening properties are unequalled. For HORSES, a small quantity daily promotes their health and protects against injury from being chilled, or from over-driving. For SHEEP, it is especially valuable as a protection against exposure to cold, and produces finer Mutton and Wool than any other feed. At present prices it is, for all feed purposes, the cheapest article in the market. For sale by all Grain and Feed Dealers, and at our Manufactory, KING STREET, between Second and Third. Liberal terms to the trade.

KITTLE & CO.,

Cor. California & Front Sts., San Francisco, Agents for Pacific Oil and Lead Works.

J. P. JONES.

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JONES & THOMPSON,

Wholesale and Retail Dealers in

Hay, Grain and Feed.

Also, Store and Sell on Commission at Reasonable Rates.

COUNTRY CONSIGNMENTS SOLICITED, and will receive prompt attention, and returns forwarded as soon as sales are made. For further particulars address as above,

1535 Mission St., San Francisco.

60 Chromo and Perfumed Cards (no 3 alike), name in Gold and Jet, 10c. CLIXTON BROS., Clintonville, Ct.

Great Slaughter IN SEWING MACHINES.

We are now offering for sale, at \$10 EACH, the following machines:

FLORENCE,

WHEELER & WILSON,
GROVER & BAKER.

THESE MACHINES ARE

Guaranteed to be in Perfect Order,

And many of them NEW.

Parties in the country can have them packed and shipped free of any extra charge. Address,

WILCOX & GIBBS Sewing Machine Co.,

No. 124 POST STREET,

SAN FRANCISCO, CAL.

Baling
Fencing
Telegraph
Telephone
Galvanized

WIRE

Barbed Fence Wire.

All kinds of Wire—iron, steel, Bessemer, spring, copper, brass and galvanized—on hand or Made to Order.

Note the Trademark.

A. S. HALLIDIE

Wire Mills.

Office, No. 6 California St.

SAN FRANCISCO.

WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

JOE POHEIM, THE TAILOR.

203 Montgomery St.,

AND

103 Third Street, S. F.

Has just received a large assortment of the latest style goods.

Suits to order from \$20
Pants to order from 5
Overcoats to order from 15

The leading question is where the best goods can be found at the lowest prices. The answer is at

JOE POHEIM'S,

203 Montgomery St., and 103

Third St., San Francisco.



Samples and Rules for Self-measurement sent free to any address. Not guaranteed.

CLOAKS and SUITS.

SULLIVAN'S

CLOAK and SUIT House,

No. 120 Kearny Street,

SAN FRANCISCO.

The Cheapest and Best Assortment in San Francisco.

SAMUEL JELLY.

Watchmaker and Importer of Jewelry, Watches, Diamond Work, Silverware, Etc., Etc.

No. 120 J Street, between Fourth and Fifth, South Side,

SACRAMENTO, CAL.

Particular attention given to Manufacturing Jewelry, and Repairing Clocks, Watches, Jewelry, etc.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y.

PACIFIC RURAL PRESS

Volume XVI.

SAN FRANCISCO, SATURDAY, DECEMBER 7, 1878.

Number 23.

A New Seedling Strawberry.

During the last year we have given engravings of several notable strawberries, both of American and foreign origin. This week we show a seedling, called the Sharpless, originated by J. K. Sharpless, of Pennsylvania. The Sharpless claims to have produced the largest berries ever grown on a strawberry plant. This gives the fruit a title to the attention of growers. The engraving gives a good idea of the prolific character of the plant and the massiveness of the fruit. The following is the technical description of the plant and fruit as laid down by Ellwanger & Barry, of Rochester, New York, who are introducing the plants:

Size.—Large to very large, an average specimen measuring one and a half inches in diameter, either way. A specimen exhibited at the Nurserymen's Convention, held in Rochester, New York, in June, 1878, weighed one and one-half ounces and measured seven inches in circumference. **Form.**—Generally oblong, narrowing to the apex, irregular, often flattened. **Color.**—Clear light red, with a smooth, shining surface. **Flesh.**—Fine, sweet, with delicate aroma, first in quality. **Plant.**—Vigorous and luxuriant, hardy and prolific.

The parties having this berry under cultivation, also say: "This variety having fruited with us several seasons we have no hesitation in recommending it as the largest and best strawberry now in cultivation. The plant is vigorous, hardy and luxuriant, surpassing in this respect, even the Monarch of the West;" and in corroboration of this an intelligent correspondent of the *Country Gentleman*, from Catawissa, Pa., the original home of the Sharpless, vouchsafes a most elaborate and emphatic endorsement; and the veteran editor himself remarks: "The Sharpless excited much attention at the Rochester Convention, on account of its enormous size, some of the largest berries weighing about an ounce and a half each."

In an address lately delivered before the Solesbury Farmers' Club, of Bucks county, Pennsylvania, by William Parry, of Cinnaminson, New Jersey, we find some remarkable statements concerning the Sharpless berry. Mr. Parry is a fruit grower and nurseryman of 40 years' standing, and is represented to us as worthy of full credence. He said in his address: "It has been pronounced by high authority to be the largest and finest strawberry in cultivation. Which high encomium would seem to be fully warranted by the following extracts of reports made of them. June 13th, 1878, F. F. Mercerou showed berries of Sharpless' seedling eight and one-eighth inches either way, and weighed one and three-quarter ounces and 10 grains, that resembled tomatoes more than strawberries. June 20th, Frank Dallam showed Sharpless' seedling strawberries that weighed two and one-half ounces and 10 grains, and measured three inches across and 10 $\frac{1}{2}$ inches around. John R. Moyer reports a monster strawberry, Sharpless' seedling, owned by J. Thompson, that measured 12 inches in circumference one way and nine inches the other. It weighed two and one-half ounces. It was put into alcohol and sent to the Paris exhibition, there to compete for the championship of the world, with a fair chance of success, for whoever heard or read of a strawberry grown on the other side of the water equal to this in dimensions."

These are rather loud statements on the strawberry question, we must acknowledge, but we have no ground to dispute them. Surely, if the future of strawberry development should be like the past, we might soon have a berry as large as a cocoanut. It is only a question as to how rapidly we are approaching this ideal. We give the statements concerning the berry as we read them in Eastern authorities. We should like to see what California conditions will do for such an elephantine fruit. Our growers

THE HOP TRADE.—Phil Neis, hop dealer in this city, favors us with a copy of his circular reviewing the hop trade at this point up to November 1st. He places the receipts as follows: California, 4,188 bales; Washington Territory, 3,493 bales; Oregon, 776 bales. Total, 8,457 bales. Exports have been, 335 bales to Australia; 184 bales to New Zealand; 34 bales to South America, Japan and Calcutta. Total exports, 553 bales, aside from the shipments overland, which Mr. Neis says have been not

Matrimonial Advertisements.

EDITORS PRESS:—I send you the enclosed advertisement. I don't know that it is according to your principles to put a matrimonial advertisement in your paper. I am a widow, have a farm nearly all paid for. I have no acquaintances, and living in such a isolated place, and having so much work and care at home, I have no time to seek any. Your paper is a farmers' paper; there are plenty of farmers alone who would like the assistance of a useful wife if one could be found, and women or men can only one-half live alone. Do you think a woman is not good because she seeks a husband in the way I have done? If so, tell me what I shall do? Lose my home and become in need of assistance from my friends, or try to find a man to be an assistance to himself as well as me. Where is the wrong if we are true to ourselves and each other? If you will insert the advertisement in your paper just once, answer and tell me how much you charge for the same, and I will send the money.

Occasionally we are called to pass upon applications of this nature, and it would be well perhaps to lay down our decisions concerning them. We have no reason to think that our correspondent is otherwise than an honest woman seeking what she honestly thinks would be for her good, and if we could help her without opening the way for other applications not so honest or innocent we would gladly do so. This we could not do. Even if our correspondent is too experienced to be entrapped by chaff, there are others who are not. In the first place the marriage relation is to serious and sacred to be approached through the medium of an advertisement. It should not be assumed without a good measure of personal acquaintance between the parties, and a knowledge of antecedents. This is not best secured by correspondence, and the chances are that our correspondent would, by advertising, secure the assistance of a man who would be more likely to help her in getting rid of her property than in securing it. But we might permit her to take her own risk on this point, were it not that the publication of her advertisement would open our columns to claims of "matrimonial advertisers," and, without knowing it, we should be introducing to the happy homes to which the PRESS is welcomed, a crew of designing swindlers and smooth-voiced libertines, who would haste to use our columns to gain access to the eyes and thoughts of the innocent youth of our households. No; we print no such advertisements. Their tendencies and their results are, as a rule, evil in the extreme. Newspapers which publish them do an untold amount of evil, because, where one such announcement is honest and with praiseworthy motive, a dozen are prompted by the darkest thoughts and desires of which the minds of men are capable. We expose our readers to no such dangers. As we said above, we are we sorry cannot help our correspondent, whom we doubt not is honest and honorable in her purpose, but we cannot do it without opening the door to those who would urge in smooth words the vilest schemes.

THE Acting Commissioner of the General Land Office has rendered a decision in the case of the San Andreas M. Co. vs Adam Lanig, ordering that the agricultural entry and undelivered patent of Lanig be held for cancellation.

THE attempt to stock the waters of Maryland with California salmon is said to have been completely successful.



THE SHARPLESS SEEDLING STRAWBERRY

have succeeded measurably well with other varieties which have been brought out at the East, and some growers have this year largely increased their returns by marketing berries of extra size. It is with strawberries as with other fruits, the large and handsome specimens are taken at good prices, while the humbler fruit lies unpurchased until it goes to the cannery or to docks as refuse.

CENSUS SUPT. WALKER says that since 1870 the increase of population in the northwest is enormous, while the south and east remain unchanged.

less than 3,000 bales. He estimates the total production of the Pacific coast this year at about 11,000 bales, against 14,500 in 1877, and 16,500 bales in 1876. It is needless to remark that prices have been altogether unsatisfactory, and much vexation and actual loss has been visited upon many growers. It is time this hop lane had a turning; it has been long enough as it is.

BREATHITT COUNTY, Ky., is in a complete state of anarchy, the county seat being in possession of desperadoes, and several persons having been killed and wounded.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Fresno County—No. 1.

EDITORS PRESS:—Once again I make bold to draw attention to this portion of the country. We ought to feel slighted. Your traveling correspondent has been through our midst, and not a line has appeared in your paper even in recognition of our existence; but then there is an excuse. The resources of our farms are still immature and as such cannot be expected to meet the eye of a casual visitor. We need the testimony of one who has watched the development of our ventures from their start, and can in such observation see the promise of a future which we wish communicated to those outside of the community. The location of my interests here have naturally led me to note carefully what has been achieved by our agriculturists, and from such data to draw conclusions which I would wish published, not for idle boast, but for the further development of the country which we expect from healthful immigration.

Two circumstances are in our favor. One is that the stream of home seekers has once more set in the direction of our favored State; the other, that we can hold out exceptional facilities to those who are willing to pay a reasonable sum for land. The Southern Pacific Railroad Company have just received patents for the odd sections here, and have graded and offered them to the public at from \$7.50 to \$4.50 an acre. From my remarks below many will, I trust, be convinced that these prices, on the terms offered, are very reasonable.

Frequent visits, and as frequent enquiry, have led such of us as are interested in making them, to the conclusion that our soil is by no means inferior to that of the Mussel Slough country which borders us on the south and west. For this country, your correspondent, J. W. A. W., has done much good in placing its advantages before the public, and it seems therefore hard for us to keep quiet when we have as much to offer and less to ask for it. If one should ask—and naturally, too—why the prices of land vary so materially in each locality, we can answer him satisfactorily. Our Mussel Slough friends are ahead of us in agricultural existence by some five years, and during that period the benefits of irrigation have had ample time to develop the dominant fertility of the soil. On the other hand, irrigation with us is still in its infancy. The construction of the first ditch was commenced on the 14th of June, 1876, and those who have had experience in the making of these artificial canals, know but too well that the work only commences on them when the water is turned in for the first time. We have just and only just reaped partial benefits from our irrigation projects, and to those benefits I shall allude hereafter. In comparing ours with the Mussel Slough country, this, of course, is lost sight of by all but our early settlers. We contend not only that our soil is every way as fertile, but that we can demonstrate beyond doubt that our facilities for irrigation are superior. Situated higher up King's river our ditches are full when theirs are empty, and further, our level acres, with their uniform grade, cannot be excelled by our southern neighbors. Reasonably, we conclude, that these advantages are not patent to the land-grader or the casual visitor as he passes over the country, but to us, who have watched with suspense the development of our farms, they leave the question of superiority or inferiority of soil no longer a matter of conjecture.

A year ago I could not have written in this strain, because the past year only has more than realized our most sanguine expectations. The warehouse erected in our little town contains tangible proof of the excellency of our cereals, and the statistics I have gathered from the surrounding farmers puts the yield of our acres at no inconsiderable figure. On my own farm (I write of it for I am quite sure of it) I have raised 45 bushels of wheat per acre from one field that had been irrigated and worked for potatoes and corn during the preceding summer. In an adjacent field, where the mode of cultivation for the summer crop of corn and beans had been somewhat different, the yield of winter wheat came down to about 30 bushels. In the latter case I attribute the diminution in the yield to mistakes in irrigation, the quality of the soil in the two fields being identical. The entire outturn yielded me a net profit of \$21 an acre on wheat alone, besides which, portion of the same land yielded me in potatoes and beans \$30 and \$20 per acre respectively. Your readers must not stop here, as I have seen some do, and multiply the \$40 or \$50 profit per acre by 50 or 100 and then jump to the conclusion that a small fortune can be made of 40 or 100 acres. The tracts I write of were small, for water had just reached us and we were unable to irrigate but a few acres. Under the most favorable circumstances, however, the work of irrigation on these parched plains is a laborious and a very tardy one. The question with us is not how much can I put in, but how much can I irrigate. Artificial irrigation is but little understood in practice, and the *modus operandi* seems to me of necessity to vary with soil and climate.

I have read that a cubic foot of water running at the rate of a foot a second is sufficient to irrigate 160 acres. But where and in what time is this irrigation to be an accomplished fact? is

the question which often occurs to me. This much I can vouch for: I have seen three feet of water running into a hole (an excavation of its own making) for 24 hours, in this part of the country; and I have further seen this same head of water advance only 100 yards along a new ditch in a week. In other places it will shoot through as fast as you can walk, it may be for 400 or 500 yards, and then again stop to follow the bent of its badger-like propensity of burrowing. The causes for these eccentricities are not yet clearly explained by our experts, though many theories are rife for their solution.

Already our growing orchards mark the landscape, their trifly condition promising well for the future. Grapevines set out from cuttings have the precocity in some instances of fruiting the first season of their growth. The same with fig cuttings. Of these facts I was sceptical, but now I have either to believe them or doubt the evidence of my senses. Peaches, almonds, apricots, pomegranates, apples, pears, plums, quinces, nectarines, etc., grow vigorously. Last, but not least, I think we can demonstrate that the orange tree will do well here. I have but a few seedlings, which I raised from the seed myself. My friend and neighbor, Prof. W. A. Sanders, has some 200 orange and lemon trees in his orchard which appear to be doing well. As I cannot and would not anticipate him in writing on this particular branch of horticulture in its relation to this place, I will leave the subject, hoping to see a contribution to your paper, from his pen, giving his experience in the propagation of the orange. In another letter I will bring forward other points which I deem of interest concerning our country.

E. KAUNTZE.

Kingsburg, Fresno Co., Nov. 22d.

Artesian Wells in Stanislaus County.

EDITORS PRESS:—There are no flowing wells in Stanislaus county at present, but two are in progress. Much interest is manifested in wells all over the county, and as soon as water is struck in the first well nearly every land-owner will bore one. The soil and the general configuration of the country in Stanislaus county is very similar to that of Merced county, where there are so many flowing wells. Stanislaus has a soil and a climate that, with water, can raise every product in perfection.

The Rodgers Well.

Stephen Rodgers was the first man east of the San Joaquin river to attempt artesian well-boring. He commenced one in 1877, and penetrated to the depth of 386 feet, when the well was abandoned on account of insufficient tools. The well is on Mr. Rodgers' place, half a mile west of Paradise City, on the Tuolumne river. The strata encountered are as follows, viz.: Surface soil, sandy loam, 4 feet; hard-pan, 10 feet; sand with streaks of blue cement, 2 to 4 inches thick—running through it, 175 feet; water-worn gravel, apparently the bed of a stream or lake—stones the size of a pebble to the size of an egg, 3 feet; blue clay, under which water was found and rose to within 12 feet of the surface, 74 feet; sand, with thin strata of blue clay running through it, and in several places black sand, large mica scales all through the sand, 117 feet; blue sandstone, or cement, with gravel running through it, very hard, 3 feet. Here the boring stopped.

In the strata of blue clay was found wood and leaves very much decayed, the species unrecognizable. Mr. Rodgers will soon resume boring in this well, and believes a strong stream will be struck just below this last stratum of cemented gravel. A windmill is at present pumping water from the well. The water is rather strong mineral water, its medicinal properties very good; has been used with advantage by invalids of Modesto. Dr. Sherman, of Oakland, has made a partial analysis of this water, which he says contains limo, sulphur, a quantity of organic matter and carbonate of soda.

The Temple Well.

Ten miles south of the Rodgers well, is the Temple ranch on which an artesian well is being bored by Haas & Manning's steam well borer. A depth of 270 feet has been reached, and the work is temporarily delayed by the bending of the pipe at the bottom of the well. This well was commenced over a year ago at the suggestion of Mr. John Ames, formerly with Vanderslice & Co., of San Francisco, and at the recent decease of Mr. Temple, heir to the estate. The boring will be resumed as soon as the pipe can be sprung back. Strata of the well: Surface soil, 5 feet; hard-pan, 3 feet; sand with alternate layers of clay 2 inches in thickness, 62 feet; quicksand, 133 feet; gravel, 3 feet; gravel and cement, 1 foot; blue clay, increasing in hardness as the depth increased, 58 feet; total depth, 270 feet. Struck redwood at 200 feet. This well is three miles east of the San Joaquin river.

Modesto Water Works Well

Five miles northeast of the Rodgers well lies Modesto. In the block facing Front street and back of the postoffice is a surface well 190 feet deep, bored last summer, for Messrs. Walthall & Rodgers. Another one 90 feet in depth, bored in 1875, is close to this. Strata of the 190 foot well: Surface soil, 6 feet; quicksand, 6 feet; hard-pan, 20 feet; fine sand, 3 feet; hard-pan, 8 feet; quicksand, streaks of red cement running through it, 127 feet; coarse gravel, 20

feet; stopped in clay. An abundance of good water is pumped by steam power.

Stephen Broadhurst's Well.

Ten miles south of the Temple ranch and two miles inside the Merced county line, a well is being bored on the ranch of Stephen Broadhurst. This well is bored by horse-power; work suspended at present owing to the breaking of the auger-rod, leaving the auger fast in the bottom of the well. Depth reached, 200 feet. Strata as follows: Surface soil, 3 feet; hard sand, 157 feet; blue clay, 3 feet; dark, heavy quicksand, 23 feet; gravel, fine on top, growing coarse toward the bottom, 14 feet; stopped in stiff, hard blue clay. No water yet.

The Evans Well.

One mile south of S. Broadhurst's place is Mrs. C. M. Evans' well, one of the best in the San Joaquin valley. This well was completed about six weeks ago. Depth of well, 310 feet. Strata as follows: Surface soil, 3 feet; hard-pan, 12 feet; quicksand, with thin strata of clay running through it, 76 feet; quicksand, 122 feet; cobblestone, 20 feet; heavy, coarse gravel, hard blue clay, 50 feet. After penetrating this the first flow was obtained, rising within 3 feet of the surface. Sandstone, 1 foot; quicksand, 22 feet; white clay, under which was obtained the present flow, 4 feet. The bore of this well is 7 inches. After striking the first flow, 6 inch casing was sunk, and below that point some where, another flow was obtained, beyond which 5-inch casing was used; the second flow brought the water just above the top. The pipe rises above the surface 2 feet, and water comes up in a steady rapid current 3½ inches above the edge of the pipe. Old miners estimate the stream at 22 inches, miners' measurement. Others estimate a flow of 175 gallons per minute, or 252,000 gallons per day. The area which it will irrigate is variously estimated at from 40 acres to 320 acres. This is purely guess work, as no one has data by which to determine; and the area irrigated by two wells of equal capacity will vary widely according to locality and degree of heat, and consequent evaporation, and according to the different kinds of soil to be irrigated and the kind of vegetation raised upon it. Again, the amount of water required after the second year will be much less than that required the first two years, before the soil becomes thoroughly saturated. The land on Mrs. Evans' ranch is a light sand loam, heavier than the soil east of her, and lighter than that north and close to the San Joaquin river. Her well is ¾ miles north of Hill's Ferry, and one mile east of the river. The total cost of the well was \$450. The land is unproductive without irrigation and very productive with it. Had she not obtained water she would have been obliged to abandon her ranch, as dependence on stock ranging over a half-section, and a small garden afforded but a meager support. Everyone rejoices at the fortune which insures comfort to her declining years, and a little competence to her children.

Charles Broadhurst's Well.

This well is a quarter of a mile east of Mrs. Evans' well. It was bored last February, and is 300 feet deep. Strata are as follows: Surface soil, 3 feet; hard-pan, 18 feet; quicksand, with thin layers of cement running through it, cement strata 2 to 4 inches thick, 102 feet; blue clay, 19 feet; quicksand, with thin layers of blue clay running through it and gravel mixed through the last few feet, 39 feet; gravel size of hen's eggs, 1 foot; solid blue clay (first flow), 54 feet; quicksand, 60 feet; light-colored clay, 4 feet. Here a flow of water was struck, flowing about 20 gallons per minute, now increased to 30 gallons per minute. At the depth of 102 feet, a petrified molar tooth was found. It was shown in Merced City, but it was not known to what species it belonged. At the depth of 200 feet, several pieces of wood, supposed to be redwood, were brought to the surface. One piece was about 5 inches long by 3 inches wide.

Mr. Broadhurst's soil is a light sand loam, well adapted to gardening. Chas. Broadhurst was the first one to strike flowing artesian water north of the Merced river.

Wells on the West Side in Stanislaus County.

Two attempts have been made to get artesian water on the west side of the San Joaquin. The first attempt was made on the Smith ranch about 10 miles northwest of Hill's Ferry, on the Big Salada. This well was bored between three or four years ago. We could gain no definite information relative to this well. It was bored about 350 feet, and abandoned. A flow of water was struck coming to within three feet of the surface. A ditch was cut down to the water and led into the creek. The water is unfit for any purpose, save physic, as it is as salt as brine.

Mr. N. E. Bunker sunk a well 300 feet, on the Chapman ranch, out towards the Cottonwoods and close by Lux & Miller's ditch, some years since. He passed through two thick strata of clay and stopped in gravel and cement, getting a flow of water to within 4 feet of the surface.

Points of Similarity

The wells we have been considering on the east side of the San Joaquin river are scattered over a line of territory 28 miles in length, from Modesto to Hawkins' landing on the Merced river. A short distance above Hawkins' landing we are told that another well has recently been bored on the Stephenson ranch. We did not visit this well. In the six wells, the strata of which we have given, we notice that a stratum of coarse gravel, from three to 20 feet in thickness, is encountered at a common depth

ranging from 175 to 213 feet in depth. In the Modesto well a stratum of gravel 20 feet thick is found at the depth of 170 feet; in the Rodgers well at from 153 to 192 feet, three feet thick; in the Temple well, at 208 to 211 feet, three feet thick; in S. Broadhurst's well, at 186 to 200 feet, 14 feet thick; in the Evans well at 213 to 233 feet, 20 in thickness; in C. Broadhurst's well at 175 to 180 feet, five feet thick mixed with sand. In each instance the gravel is water-worn and evidently marks the depths at which it is found, as the bottom of a large inland stream or lake of some former period. In five of these wells the stratum immediately above the gravel was sand. In the Rodgers well, the Temple well and the Evans well, the strata above the gravel occur in precisely the same order, though varying in thickness, and in each the stratum just above the gravel is said, ranging in thickness from 175 to 200 feet. In each of the six wells, blue clay lies just below the gravel, and in four wells, where it has been penetrated, it ranges from 50 to 74 feet in thickness. In four of these wells mention is made of wood brought to the surface, supposed to be redwood; in two wells at a depth of 200 feet in blue clay; in a third at 200 feet in quicksand; and in the fourth at 188 feet in gravel. It is an open question whether or not this was drift-wood from higher lands, as we believe it to be, or grew on the spot. Something resembling tile was found in the Temple well, and the "leaves" in Mr. Rodgers' well may have been the same.

A line drawn south from Oakdale to a point about five miles east of Turlock would divide the level sand lands on the west from the rougher, more uneven, red lands, adobe and mulatto lands, on the east. We believe all that portion west of such a line down to the San Joaquin might be, to a large extent, irrigated with profit, and that it may be considered an artesian well belt in which an overflow may be obtained, with reasonable certainty, by boring from 300 to 425 feet. All the flowing wells obtained thus far, north of the Merced river, have been bored by those least able to take any risks. There are several large landholders, however, who have not contributed one cent, who will heroically face the new situation and put up the price of their land on the strength of it, with a steady nerve that comes of far-sightedness above ground based on occult demonstrations beneath.

Artesian Wells in Stanislaus County.

There is water here. All that is wanted is some one to go after it and employ men with suitable tools, and men who know how to handle them. The day of ditches, long and expensive, has not yet come. Twenty years hence, when our population is more dense, ditches will be an imperative necessity. To-day artesian water, where it can be obtained, is perhaps preferable, for the ground has to be prepared and the people must grow into the knowledge of the most economical method of applying water for satisfaction or profit.

Turlock, Nov. 11th.

H. E. HALLETT.

Experiments with New Plants.

EDITORS PRESS:—I have felt greatly interested in the articles written by Mr. W. A. Sanders. It seems there is a tendency by many experimenters to find out plants which will produce green feed during our dry summer. I also tried my hand on some; as for instance the so-called Egyptian corn, white and brown variety, prickly comfrey, pearl millet, etc. The Egyptian corn sustained in this neighborhood its reputation, and has done especially well whenever it has been planted right and in good soil. As feed for poultry it is hard to surpass it by any grain. It is especially good to raise young chickens. I find they grow fatter and look better than if fed on any other grain. I have Brown Leghorn pullets fed with it principally since they were two weeks old, and three of one brood layed the first egg when they were 118 days old from the day of hatching. Now, who can beat that?

The prickly comfrey seems to take well in the Eastern States. My experiments I cannot call a perfect success, nor can I call them failures. I had a few plants which I planted last year, and up to July 15th I made heavy cuts of leaves. After the last cuttings the growth was very slow. At first I could not find the cause, but by examining the subsoil it was all clear to me. The subsoil is a solid brick clay and by the middle of July the top soil got so dry that the comfrey did not find moisture enough to produce foliage. I planted some young plants in May last in moist, sandy soil, they grew very rapidly and have made four heavy cuts up to this date. I find the sandy river bottoms are the places for the comfrey, or any kind of land that can be irrigated after July. The plant produces immense quantities of leaves if cultivated in the right soil. Oregon and Washington Territory I think, as a rule, will produce this plant to perfection. The advantage in the comfrey is in being a perennial plant.

In the line of grasses, the pearl millet certainly beats anything I ever tried here and in the Southern States. It is fully as sweet feed as any of the different kinds of sweet corn, grows very quickly, can be cut early, and four cuts, from three and a half to four feet in length, can be produced in one season. Mr. Henderson says, in the *American Agriculturist*

for this month, that he produced, in 135 days, 95 tons of green feed which, when dried, weighed at the rate of 16 tons per acre. I find millet resists our dry, parching summer heat better than any other of the corn family. It has immense foliage and the stems, if planted close, are not too coarse for any stock to eat. As a plant for milch cows during the dry summer, I consider the pearl millet the best acquisition for this coast, and this section especially.

I have a new oat of which I enclose you a few grains and three small heads. It is called the "Chinese hullless oats." You find by examining, the grain threshes out like rye or wheat, a clean kernel. I got a little over two pounds the 15th of last March. The same day I planted about a pound in drills in unmanured adobe soil. On June 25th I cut it; the space was 20 feet square. It produced 50 pounds of seed. The balance I planted 10 days later (on account of a spell of rainy weather) broadcast. It did not produce quite as much by 10 pounds. Considering the large returns and the facility to make oatmeal from this oats, we can form an idea of the great importance of its introduction on this coast. G. HUNZIKER.

Cloverdale, Nov. 18th, 1873.

[Our information is that comfrey has not generally succeeded at the East. The specimens of oats which our correspondent sends of the "hullless oats" are very fine; the finest we ever saw of this grain. Hullless oats are not new and we know no reason why they should have the name "Chinese." The grain has been brought forward from time to time at the East for the last century almost, but it never secured very wide culture. We shall be interested to know what our California growers succeed in doing with it.—EDS. PRESS.]

Potatoes with Ashes.

EDITORS PRESS:—Five miles above Nevada City we were told that from two acres of red land seven tons of Salt Lake potatoes had been dug. The quality was superior—white, mealy and smooth, perfectly sound. An adjoining field, soil and culture alike, but the late rose variety planted, were badly diseased. The Salt Lake variety is much cheaper at three cents a pound than the rose at one.

We had four rows, two rods in length, each planted May 1st, with late rose seed, grown on Sacramento River islands—the seed more or less spotted with dry rot. The soil was new, and well manured and pulverized. Two rows had wood ashes liberally applied and raked in through the row, and again when the seed was dropped. They were hoed six times; each time dry ashes (from oak wood) were applied thickly over the vines. We commenced using young potatoes, July 1st. The two rows yielded 150 pounds of bright, mealy, sound potatoes. The two rows, receiving the same culture excepting the ashes, were so badly diseased as to be wholly unfit for food.

This little experiment simply points to a deficiency of potash in the soil, and the necessity of supplying it if we wish fair potatoes.

Mrs. C. F. YOUNG.

Nevada City, Cal.

Some Pumpkins.

EDITORS PRESS:—Some pumpkins are quite a help on the farm along in the fall and early winter, when feed is as a general thing quite dry. Then, to, some of us have tasted more unpalatable desserts than pumpkin pies. In fact, can't most of us "Lords of Creation" bite a pumpkin pie about as deep as any pie we ever stole from the cupboard? Now, for the pumpkin patch. Rule 1st. Never plant anything else in the ground amongst the pumpkins. 2d. Plant as early as you can, so as to be behind the danger of frost. Low sandy loam localities are best. To much moisture, however, will cause the vine to drop the young pumpkin. It requires much experience not to spoil a pumpkin crop with irrigation. Don't check off your land for planting with a plow. It guides moles and other rodents to find the seed when planted. Use much care in planting the seeds. A pumpkin seed is like a bean; if planted too deep, it will perish. It germinates, rises and opens for daylight, and if too deep, there the case ends. Two vines in a hill 14 feet each way is thick enough. When vining begins, cultivate well, and if you don't have "some pumpkins," I would like to know the reason why.

GEO. KAY MILLER.

Los Nietos, Cal., Nov. 16th, 1873.

PRACTICAL RESULT OF AN ARCTIC EXPLORATION.—Wheat from a new source made its appearance in Europe this year. The Danish vessel *Neptune* having brought a cargo from the Obi river in Siberia, to Hamburg. The voyage from Hammerfest, in Norway, through the Arctic sea to the mouth of the Obi and return was made in five weeks, and without any serious difficulty. Siberia is a great country in extent and there are said to be almost limitless possibilities in the way of wheat raising on its vast steppes, but as long as the country is as thinly peopled, and as difficult of access as at present, our Western wheat growers will have little to fear from its competition. The voyage of the *Neptune* was suggested by recent explorations made in the Arctic sea.

HORTICULTURE.

The Citrus Family at the Los Angeles Fair.—No. 1.

EDITORS PRESS:—The display of citrus fruits was, of course, next to nothing, because October, the time of our horticultural fair at Los Angeles, is about six months too late or two months too early for the usual time of the orange harvest, and as for the other members of the citrus family, some of which are abundant at all seasons of the year, they are assigned a back seat, whereas they deserve a part of the front seat. There was, however, something of a display of lemons, and there could have been a show of ripe oranges of last year's crop, for it is true that, as usual, sound, extra sweet and delicately flavored oranges of last year's crop were, in October, and still are, hanging on the trees in the orange groves of southern California.

These oranges are the remnants of the crop that matured in the winter of 1877-8, and were left, a few through oversight, the majority intentionally, because too small for market. Southern California, being a producer of the fruits of all zones, each month being the heyday or witness of the climax of some crop or another, it follows that more than one fair each year is necessary for the complete display of our soil products. Owing to the remarkable preservative qualities of the climate, two fairs each year would afford sufficient opportunity for a full display. Two fairs a year would, however, overtax the fair-sustaining resources. Loquots, Japanese persimmons, strawberries, granadillas, cherries, currants, raspberries, blackberries, salmon berries, whortleberries, gooseberries, oranges and other products, are likely to be forever strangers to the annual fair.

People will forgive the non-exhibition of almost any fruit rather than the orange. A Los Angeles fair, without oranges, is like a fair at Newark, with cider left out, or at Sheffield, with pocket knives left out, or at Newcastle, without black diamonds. Even our own fellow Southern Californians arraign this omission of oranges. The faithful San Diego has more faith in climate, harbor, and a transcontinental than in a Los Angeles fair, with oranges left out. It was a San Diego who printed animadversions on this latest parallel of the play of Hamlet, with Hamlet left out. The San Diego, in this connection, is exercised two times: Firstly, because he saw no oranges at the fair; secondly, because he had some splendid ripe oranges himself and did not bring them to the fair. He did not wish to incur the suspicion of being the identical man who carried coals to Newcastle. Bring on your San Diego oranges next October. Some Los Angeles tree may be permitted to carry its best gold until next October in order to a competitive display.

In no respect are the citrus interests of California and other citrus regions in contradistinction, more favorable to California than in the capacity of our orange to remain sound and good a great while after the date of ripeness. The orange grower here may spread gathering over a full half year and spread gleaming over the remaining six months, or may begin and finish the harvest in any week from December to April. The orange grower of California, as a harvester, is freer from the necessity of hurry than any other known fruit-grower. They are, in a sense, masters of the situation and the independent electors of times of gathering and times of marketing. The importance of such a full range of option between such widely apart extreme limits of time is appreciated even by the novice.

In contrast with these advantages of the Californian orange grower are the necessities of the Floridian to gather and market oranges within a very much shorter period, because of the liability to early decay. The writer, on a tour through Florida some years since, arrived at Micanopy in the first week in January, and was informed that a single cold night in the next previous December had reduced an orange crop from a merchantable value of \$3,000 to a value only for the purpose of a double-quick gratuitous distribution among the neighbors. Other causes hasten the decay of the orange in Florida.

Another conspicuous advantage arising in the disposition and habit of the orange of California to remain sound on the tree in a ripe state, from December to December, are the convenience and luxury of eating ripe oranges directly from the tree every day in the year. These unsevered apples of gold, in pictures of orange bowers, deepen in hues of gold and intensify nectarine riches as they linger.

As for lemons and limes, they, too, may be had fresh from the tree every one of 365 days in the year. The lime tree here, any day both of winter and summer, presents leaf-bud, bloom-bud, young leaves, old leaves, blossoms, green fruit at all stages of growth, and fruit at all stages of ripening, and perfectly ripe. Every day from July to December and from December to July, the lime tree, more tireless and busy than the busy bee, is elaborating beauty of stem, bud, leaf bloom, exquisite delicacy of aroma, and fruit that is grateful, vitalizing, purifying, anti-bilious, anti-inflammatory, anti-all-sorts-of-fevers, including yellow fever.

An old lady, a native of a Bahama islet, in-

formed your correspondent, while on his travels within torrid regions, that lime and other citrus juices, in their natural state, are the safely and universally trusted febrifuges in the West Indies. That through negligence of the habitual daily use of citrus liquids in times when yellow fever prevailed the West Indian is in peril. Instantly, however, when Yellow Jack tingles the nerve-bell, limes come to the rescue and Yellow Jack expires in copious potatoes of frost-pure lime juice.

The fruit basket containing limes is a feature of every well-regulated West India table. The lime is much more highly valued there than the lemon. The West Indian squeezes lime juice into soup and other dishes. Citrus fruits are the best for sea voyages, because most highly antiscorbutic. True the fruit will not keep on long voyages, but limes or lemons enough for use in the earlier part of the sea voyage, to be followed by the use of the less efficient citric acid, ought to constitute a large portion of ship-stores. Citrus extracts are not adequately prominent in the world's pharmacopœia. Californians are not exempt from maladies that would be prevented by the habitual use of lime and lemon juice. Less nearly exempt are the inhabitants of the other sections of the Union. All the malarious regions of the lower and upper Mississippi valley are annually in need of limes or lemons by the train load. Violent is that need in the yellow fever districts. Florida cannot render supply. No other region within the United States can supply the need except California. California can produce limes and lemons enough to purify all bilious America, and leave enough to treble the apportionment all over the Yellow Jack's pre-emption, while that scourge is there. English policy develops customers and commodities; *pari passu*, California can profit by the example. The trouble with the Vicar of Wakefield's son Moses, was not that he had too many green spectacles, but that he lacked the vim and tact necessary to develop customers.

Practically unlimited as are the capacities of California for the production of limes and lemons, the fleets of the sea, malarial America and the demands of the luxurious, authorize the development of those capacities provided the producer, the middle-man, the carrier and all corners between the grove and the lip determine that those who need limes and lemons shall know it, and knowing shall be irresistibly inclined to purchase by reason of the very universality and cheapness of the great blessing.

J. deBarth Shorb, Thomas A. Gary, L. J. Rose, the late Hon. B. D. Wilson and Louis Wolfskill, of Los Angeles; Capt. Pishon of old San Bernardino, and others, have demonstrated that the profit of orange culture impart to land a value of from \$5,000 to \$10,000 per acre by returning a clear annual profit of 10% on the stated sums of money. Lime and lemon culture ought not to be far behind. The facts supporting the demonstration survive the dead, abide with the living, recur every year, are open to public inspection and are susceptible of investigation by the observing and calculating visitor. But it should be borne in mind that considerable capital, extraordinary patience and sagacity are the price of a profitable orange grove. Comparatively few are qualified to embark in the culture of citrus fruits.

The interest in citrus culture is unabated. There is a single citrus nursery in Los Angeles, known as the "Co-operative Nursery and Fruit Company," containing one-half a million orange and lemon trees now, of the proper age to be set out in orchard. Two hundred and ten acres are occupied by this nursery. There are many other citrus nurseries in various parts of the county, and all are annually increasing their stock. Many of these nurseries made great display of nursery stock at the fair, and I shall speak of them in another letter.

J. H. SHIELDS.

Florence, Los Angeles Co., Cal.

PISCICULTURE.

Carp Culture.—No. 2.

The Construction of Ponds.

The conclusion from what has been said will be that the carp is well adapted for culture in inclosed waters, such as artificial ponds. The construction of such ponds I will try to describe. First I will give a general rule that will apply to ponds of all sizes from 1,000 acres to one rod square, and that is in selecting a site for ponds of considerable size these points ought to be observed:

1. Is there a sufficient supply of water in the dry season? 2. Is the ground, soil and water favorable for fish culture? 3. It is important to examine the land minutely, in order to find what the components are. 4. It ought also to be decided from the commencement how large the establishment is intended to be; whether only for private use and pleasure, or at wholesale for the production of the fish as an article of trade.

A rocky, gravelly ground is not good for carp culture. Ground with a considerable mixture of loam, clay and humus is good.

If the size of the pond has been decided on, the leveling of the bottom is required to assist in the determination of the depth of the ditches, collector and outlet to be dug. A ditch should run through the center of the pond, and be

from two to three feet deep, and four or five wide. In ponds of considerable size there should be cross ditches. At the lower end of this ditch there is what is called the "collector," which is a place dug out large enough to hold all the fish in the pond. This should be one foot deeper than the ditch, and from this the sluice box runs through the dam.

In the erection of the required dam it is most important that it be made of the very best material, so as to make it secure against the destructive influence of the water. It ought to be three times as wide at its base as it is high, and at the top as wide as it is high. The interior, or water-side, should be less inclined than the exterior one.

If it be designed to make use of natural ponds, of which there are numbers in every State in the Union, it is necessary to ascertain whether they can be put into the proper condition for regular culture. This can only be done if the influx of water can be regulated and the entire drainage of the pond made possible. Trunks of trees should be taken out of them, and when they are too deep they should be filled up, or, if this cannot be done, they should be brought into connection with the above described sewers on the bottom of the pond. If this is not done too many fish will remain in these holes when the pond is drained, and this will lessen the profits to a great extent.

To carry on carp culture in a regular and judicious manner, several ponds are required, according to the various purposes they are destined for: First, the hatching pond; second, the breeding pond, or pond for small fish; third, the culture or regular carp pond.

Of other branches of the subject I will write at another time. LEVI DAVIS.

Forestville, Sonoma county.

ARBORICULTURE.

The English Oak for California.

EDITORS PRESS:—Some years since while in California I made a suggestion, which I here renew, believing that it is well worth your attention. You know the common remark, which is no doubt overdrawn, that California cannot furnish timber for a wagon-wheel. There is too much truth in the remark. With all her wealth of redwood, pines and firs, she has little hardwood timber fit for those uses supplied elsewhere by oak. True it is, that one or two species of native oaks are promising; but, alas! they grow sparingly in almost inaccessible places in the canyon.

Now why not, in these days when eucalyptus planting has become such a habit, vary the planting by making groves of the English oak (*Quercus Robur*)? There are many places in California and Oregon where it would grow without any doubt, and there can be no question as to its value or as an addition to the resources of the Pacific coast. At first, no doubt, many people will plant it in places where it will not grow. I doubt whether it would do well in the great valleys; the summer drought would be too severe; but in moister regions—say the redwood region, and many places in the foothills—it would probably do well and make a rapid and valuable growth.

Can California look ahead 50 or a 100 years, and provide for a still greater future wealth by a little wise expenditure now?

C. E. BESSEY.

Iowa Agricultural College, Ames, Iowa.

Surplus Ships.

Those who have crossed the bay frequently during the last few months have noticed the large number of ships idly waiting for charters and have concluded that the ocean freighting business must be dull. Thus it is all over the world and the *Maritime Journal* quotes an extract from a speech of a Bristol, England, ship-owner, which states facts and draws conclusions. He said: Last month more than 50,000 tons of shipping were lying idle in Bombay. In Calcutta, ships had been lying 12 months, during which time there had been from £0,000 to 100,000 tons disengaged and constantly pressing on the market, with freights averaging about one-half the paying rate. The China seas and the Straits are full of ships. In Australia, a friend has had a ship waiting for three months for a chance to load some. In San Francisco, there were in July 100,000 tons lying in port. The explanation of the present condition of the shipping trade is no new or intricate story. Free trade increased the volume of exchange in the world—in other words, the volume of the carrying trade of the world—so immensely in proportion to the then existing supply of shipping, that high profits were the rule for many years. Ship building was actively stimulated, and all the arts connected with it were energetically spurred on. The history of the building of iron ships is the history of a constant series of discoveries and inventions, involving a rapidly progressive facility of production, and leading by changes of form and new systems of management, to such a reduction of cost and extension of accommodation as would have seemed, only a year or two before each improvement, to be fabulous and incredible. Hence a perpetual temptation to fresh tonnage; and hence two million pounds sterling of shipping are lying idle in the Indian ports at this moment.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Farmers' Union of San Jose.

We lately had the pleasure of inspecting the new building of the Farmers' Union at the corner of Santa Clara and San Pedro streets, San Jose. The building is a large, handsome structure, three stories, high between joists, and a spacious basement. The frontage of the property upon Santa Clara street is 60 feet and the depth on San Pedro street, 150 feet. The style of the building is excellent, and it has all the signs of being well planned and constructed. The basement is devoted to the storage of sugar, syrup, etc., which are imported direct and purchased at the lowest wholesale rates. The first floor is the store proper, with its several departments of fresh and choice-looking merchandise. In front is space devoted to banking or financial branch of the Union. One striking feature of the interior arrangement of the store is the cashier's counter, occupied by a lady of experience in the handling of money. She also has charge of a candy and variety stand, which is arranged in the form of a booth, and is tasteful in all its appointments.

The second story is divided into rooms of various sizes, and on the third story is a Grange hall, 20 by 50 feet, besides a spacious auterom and a dining hall. In covered sheds, contiguous to the main building, large quantities of agricultural implements and other goods for farm use are conveniently stored. The cost of the building was \$50,000, exclusive of the land, which has increased in value since its purchase.

At the time of our visit, the new coffee roaster was in full operation, and the air was filled with an aroma suggestive of cordial welcome and hospitality. We found the establishment praiseworthy in all its arrangements and patronized by a large number of farmers and residents of San Jose. The plan of the enterprise is to buy in large quantities at first hands, doing their own importing, and thus they are enabled to sell to customers a straight article at the lowest rates. The amount of the business of the Union now ranges from \$20,000 to \$25,000 per month and it is constantly increasing. The establishment is regarded by farmers with much satisfaction and is constantly gaining in popularity. The following are the officers of the Union: C. T. Settle, President; H. E. Hill, Manager; W. M. Ginty, Cashier. Directors—William Erkson, L. F. Chipman, Horace Little, C. T. Settle, David Campbell, James Singleton, Thos. E. Snell, W. L. Manly, J. Q. A. Ballou. Much credit is due the officers of the Union for carrying the business rapidly forward to its present status.

A LIVELY PHOENIX.—The Grangers' Union wire fence factory, of Stockton, is about the liveliest phoenix we ever heard of. Its building was destroyed by fire on Wednesday evening, Nov. 29th, and on Monday evening, Dec. 2d, it was rebuilt and began work again. The Stockton Independent says: The machines and stock were uninjured, and the damages to the building amounted to scarcely more than \$100. They have a capacity of turning out 2,000 pounds of wire in 10 hours, but have been making about 3,000 pounds daily by working in the night to supply the demand.

STANISLAUS GRANGE ENTERTAINMENT.—We return acknowledgments and thanks to Bro. Vital E. Bangs, of Stanislaus Grange, for cards of invitation to an entertainment to be given by Stanislaus Grange, at Modesto, December 14th, at 7 P. M. There are to be literary exercises at Gridley hall, and afterwards refreshments will be served at Grange hall. We regret our inability to attend, and hope that the meetings will be grand successes, as we doubt not they will be.

In Memoriam.

GEORGIANA GRANGE. No. 122, Isleton, Sacramento county, November 23d, 1878.

WHEREAS, We are called upon to mourn the loss of one of our members, as it has pleased the Great Master of the universe to remove our worthy Steward, Bro. F. M. KITTRELL, from his field of labor with us, to that field where they toil not, but the weary are at rest; therefore be it

Resolved, That in the death of Bro. Kittrell, the bereaved family lose a kind and loving husband and father, the community a valuable and esteemed citizen, and the Grange one of its most active and esteemed members.

Resolved, That this Grange fraternally extend its warmest sympathy to Sister Kittrell and family in their affliction, and we most humbly invoke the blessings of our divine Master to comfort and cheer them, and to brighten their pathway through the gloom of their sad bereavement.

Resolved, That as a token of respect to the memory of

our departed brother, our charter be draped in mourning for 60 days.

Resolved, That the Secretary enter these proceedings on the records of the Grange, and send a copy to Sister Kittrell, and furnish a copy to the PACIFIC RURAL PRESS, California Patron and Rio Vista Enterprise, and request publication.—(P. H. Gardiner, C. R. Hillgrove, Mrs. M. A. Hensley, Committee.)

OAKDALE GRANGE. P. of H., No. 160, Stanislaus Co. WHEREAS, we are called upon to mourn the loss of one of our members, as it has pleased the Great Master of the universe to remove our worthy Secretary, Brother C. B. INGALLS from his field of labor with us to that field where they toil not, but the weary are at rest; therefore, be it

Resolved, That in the death of Brother Ingalls, the bereaved family lose a kind and loving husband and father, the community a valuable and esteemed citizen, and the Grange one of its most active and trustworthy members.

Resolved, That the Grange fraternally extend its warmest sympathy to Sister Ingalls in her affliction, and we most fervently invoke the blessings of our Divine Master to comfort and cheer her, and to brighten her pathway through the gloom of her sad bereavement.

Resolved, That the Secretary enter these proceedings on the records of the Grange, and send a copy to Sister Ingalls, and furnish a copy to the county papers and RURAL PRESS for publication.—(A. S. Emery, C. R. Callender, Mrs. A. S. Emery, Committee.)

El Sobrante Rancho.

Denunciation of Land Grabbing.

On Saturday last the Settlers' League of El Sobrante, met in Brooklyn, Mr. P. H. McGrew, presiding. A number of resolutions were adopted, denouncing the land grabbers, Carpentier and others, and declaring the action of the land authorities in withdrawing townships 1 south range 2 west, 1 north range 2 west, and 2 south range 2 west, 2 south range 1 west, a violation of the rights of the settlers on such land and declaring that the question should be referred to the United States Surveyor General, and both sides allowed a hearing. The President was authorized to interview Commissioner General Williamson of the Land Office, who will shortly be in San Francisco, and submit the matter to him.

Ninety heads of families, actual settlers, having a family population of 375, were represented at this meeting, which took place in Schimelpenninck's hall. After due deliberation and remarks by the settlers assembled, the following preamble and resolutions were adopted, and signed by all present:

WHEREAS, For 15 years, Horace W. Carpentier by fraud and bribery of public officials, has kept withdrawn from market a large area of public land in Alameda and Contra Costa counties, under a pretended Mexican Grant claim, and defeated every attempt of the settlers to have the lands thrown open to entry; and

WHEREAS, Our attorneys did recently succeed in having public surveys made of certain townships (described above) were again brought to a standstill by the action of the Commissioner of the General Land Office, who on an *ex parte* showing without notice to us, ordered the U. S. Surveyor General to withdraw from the Land Office the plots of said townships, notwithstanding the fact that the said surveys were paid for by the settlers, and were regularly and legally made; and

WHEREAS, The most liberal survey possible of the Sobrante Rancho could not include any of the lands in said township. Therefore be it

Resolved, That the withdrawal of said plots was an outrage and in violation of the rights of the settlers on said land and of the rules of the Land Department, because the question should have been first submitted to the U. S. Surveyor General, and both sides have had a chance to be heard thereon.

Resolved, That we call upon the Commissioner of the General Land Office to restore said plots, in order that the settlers may perfect their titles.

Resolved, That the President of this League, P. H. McGrew, be requested to call upon the Commissioner of the General Land Office, who it is said will shortly arrive in San Francisco, and lay before him a full statement of our case, in order that justice may be done.

Resolved, That we hereby express our confidence in the integrity of the Hon. Theodore Wagner, present U. S. Surveyor General; and feel that the thanks of this League are due to him for his action in cutting down the Sobrante Rancho by the survey made under his direction; and if he continues to stand against such unprincipled schemers and grabbers as this man Carpentier and his associates, he will deserve the good will of hundreds of poor settlers who have been robbed by the connivance of dishonest Federal officials.

Means were also taken to insure the active prosecution of the claims of the settlers, to the end that justice may be done accordingly, to the settlers and their families.—Oakland paper.

A COMBINED SCROLL SAW AND TURNING LATHE.—Those who wish to encourage the development of mechanical skill in their boys, or who wish a cheap and comprehensive machine to exercise their own ingenuity upon, will be interested in the combined scroll saw and turning lathe, which is shown in an advertisement in another column. There could not well be devised a holiday present which would more excite pleasure in an ingenious boy than this simple and yet very capable apparatus. It has a scroll saw with an adjustable table, which will cut anything from a thin veneer up to an inch board. It has a drill which works either in wood or metal, and a turning lathe which will take in a stick 9 inches long and 3 inches thick. Various tools are also furnished. There is no limit to the useful and ornamental work which an ingenious worker, either youth or adult, could turn out with the aid of this device. It is being sold ready boxed for shipment, by Dunham, Carrigan & Co., of San Francisco.

RESTAURANT RE-OPENED.—The Palace restaurant on Sansome street, near California, has been re-opened by the experienced caterers, Horst & Toedter, and lower prices than ever before are visible on the bill of fare. We are glad of the re-opening. The Palace was long our noonday resort, and we trust the new proprietors will succeed in their enterprise.

AGRICULTURAL NOTES.

California.

AMADOR.

SIXTY-NINE POUND WHEAT.—Dispatch, Nov. 30: Last week we mentioned the fact—and we felt a little exultant over it—that Mr. Andrews had raised wheat, a few miles above Jackson, which averaged 66 pounds to the bushel, just as it came from the thrasher. But this week we are enabled to make a still better report for our foothill lauds. Mr. James Spear, whose ranch lies about two miles and a half northeast of town, a few days since, weighed out two bushels of his wheat—taking it from the bulk as it came from the threshing machine—which balanced 138 pounds; thus showing an average of 69 pounds to the bushel. Mr. Spear's barley, raised on the same ranch, averaged 53½ pounds to the bushel. The average yield per acre, of both wheat and barley, was 30 bushels.

COLUSA.

SEED WHEAT AGAIN.—Sun, Nov. 30: At the request of the Sun, Mr. J. K. West, of Butte Creek township, selected 100 badly shrunk grains of wheat and planted them in a pan of earth, which was properly watered, and he informs us that he has 96 healthy and vigorous stalks, as the result. He thinks from the looks of the stalks at present that they are as healthy and would produce as well as any that could be produced from plumper seed. It is well known that almost all kinds of vegetation is capable of improvement, by the constant selection of seed, and they hold in older countries that the same is true of wheat. It may be that the difference in one reproduction is not appreciable, but we certainly hold that all kinds of vegetable matter can be improved or degenerated, in time, by the selection of seed. It would be a very interesting experiment to run through a series of years, sowing two patches, and taking all the while the plumpest from one patch and the worst shrunk from the other. There is another curious thing about wheat, which we have heard discussed a good deal, and that is: Will wheat sprout the second time? Mr. Isaac Cleghorn, of Antelope valley, told us the other day that he once sowed some wheat that had been sprouted and the sprouts all dried up, and that it grew and made a good crop. This is very important to farmers, if absolutely true, as it very often happens that early rains will sprout wheat, and subsequent dry weather kill it.

FRESNO.

NEW LAND.—Espositor: The farmers in the vicinity of Kingsburg and Duke are preparing to put in nearly four times as much grain the coming season as they planted last. This ratio will be preserved throughout nearly the entire county, if the season only gives a fair promise. Should we be favored with another good season, Fresno's position among the grain-growing counties will be well up in the list.

LAKE.

WINE.—Lower Lake Bulletin, Nov. 30: David Voight, who lives near Lower Lake, this week handed us a bottle of red wine, of his own manufacture, made of grapes from a vineyard only three years old. The wine having been made but a few months ago, has, of course, but little "body" as yet, but is very pleasant to the taste. When this wine shall have attained the proper age no doubt it will compare favorably with the best of California wines. It is Mr. Voight's purpose to enter the business of wine-making on a large scale when his facilities warrant it.

LOS ANGELES.

SWEET POTATOES.—Herald, Nov. 30: The question of raising dry, delicious sweet potatoes in Los Angeles county has been settled favorably by Mr. Bangle, who farms near Downey City. Mr. Bangle sent East for seed—the Cuban variety—and the result is a sweet potato delicious enough to remind an ex-cotton belter of the excellencies of that esculent as grown in the warm sands of Georgia or Alabama. In fact, our informant, a citizen of Florence, who has tried Mr. Bangle's sweet potatoes, has cultivated that tuber in Alabama and knows whereof he testifies when he states that Mr. Bangle's sweet potatoes are so nearly equal in quality to those of the same variety grown in that cotton State, that it is hard to tell the difference.

GRAPE AND ORANGE CROPS.—Herald: We are informed by Mr. L. J. Rose, of the Sunny Slope vineyard, that the grape crop of the past season has been so small that, while he has been able to make his ordinary quantum of wines, the brandy will be short this year. During the past week Mr. Rose has been engaged in buying wines extensively, his purchases embracing 12,000 gallons in Anaheim. The demand for and appreciation of California wines is increasing rapidly in the East. While the yield of our vineyards has been disappointing, the coming orange crop, Mr. Rose informs us, promises to be very satisfactory. The oranges will be both numerous and of good quality. As to what our next year's crop of grapes will be, of course, depends on the season. If we have seven or eight inches less rainfall this year than last, it will be large. Experience has shown that an excessive rainfall in southern California is hurtful to our vineyards.

HEAVY SWEETS.—Cor. Anaheim Gazette, Nov. 30: Mr. J. Stanley, of Tustin City, has a sweet potato or yam on exhibition at the Tustin post-office, which weighs 22 pounds, measures three feet four inches around lengthways, and two

feet three and a half inches around its circumference. Mr. Stanley is a good sweet potato farmer. He sold one that weighed 14 pounds. The party takes it to Los Angeles. He also sold another man a sackful; the sack would not hold but nine potatoes, and it weighed 90 pounds. The purchaser thought he wasn't getting potatoes enough, and said he would bring another sack. Mr. Stanley intends to send the 22-pound potato to San Francisco, and it will be on exhibition there for short time. It will then be sent to Petaluma, Sonoma county, his former home.

MENDOCINO.

GRASS AND PLOWING.—Democrat, Nov. 30: Many of our farmers have been doing some plowing, but were anxious for more rain to finish up on. We reckon the rain of this week gave them a sufficiency for the present. It is judged the ground in many places was watery anyhow, for the rain did not seem to penetrate and sink very freely, but lingered on the surface. Grass has been doing finely, and will continue to do so if the present mild weather keeps on. Stock must be faring well throughout the county.

SECOND GROWTH PEARS.—G. A. Hocker a few days ago gave us a second growth pear, of the Bartlett species, which had grown upon a tree in his garden, here in town. It was excellent. The first crop was off about a couple of months earlier. Of the second crop there were about 20 pears.

MONTEREY.

SALINAS VALLEY.—Index, Nov. 30: Farmers are busy plowing in various portions of the Salinas valley. Some seeding is also being done. The acreage sown will be much greater than ever before. Somehow or other we do not feel the same degree of uneasiness about the rain that we did a year ago, being impressed with the belief that we shall have sufficient moisture to produce excellent crops. It will not require anywhere near so much rain this year as it did last year to place the soil in fine growing condition. Eight or ten inches at the proper time will produce the desired result.

NAPA.

GRAPE GROWING EXTRAORDINARY.—Reporter, Nov. 30: A crop of grapes has been grown in this county, this season, near St. Helena, which is deserving of special notice, on account of the enormous yield. The vineyard consists of six acres, and is situated on the creek, the land being of extreme fertility, with special adaptation for grapes. The variety of grapes on this vineyard is the Zinfandel, a Hungarian grape, from which the choicest California claret is produced, and which has the singular and pleasing habit of producing two crops a year under the best circumstances. The first crop from our six-acre vineyard produced 45 tons, and the second 40 tons, or over 14 tons to the acre for the year. The crop was sold to Mr. Berringer, a wine-maker of St. Helena, at the rate of \$21 per ton for the first crop, and \$18 per ton for the second. The aggregate money yielded being \$1,665, or at the rate of \$277.50 per acre. We claim for this the championship, and point to it to show the possibilities of a few acres of well tilled land in California. All the labor needed on this place can be easily done by one man, leaving time to attend to his cow, harvest a small hay crop, and look after poultry enough to supply himself and family with "store goods." The vast wealth and financial strength of France comes from the efforts of her five and a half millions of holders of small properties. We are yet too young and too extravagant to follow the French exactly, but as years go by, and necessity forces upon us more thrift and better methods, instances like the above will multiply into thousands and tens of thousands. We have everything to make them possible except the habits of the Frenchman.

GRAPES.—Register, Nov. 30: The grape crop this year has been unusually large, and prices remunerative, the vintners having had a prosperous season. Although in our valley some raisins are dried, none are put on the market that we know of at present, but F. Mann, who lived in Brown's valley a few years ago, put up in small boxes a very nice article which found a ready sale. And yet, the home-dried raisins are very good, and scarcely distinguished from the imported fruit when cooked. When grapes in former years ruled low, it was said by many that hogs would fatten on the fruit very fast, and they were turned into some vineyards, though we think the number in this vicinity was small. It was a very wasteful proceeding, and will in all probability never be practiced again, as the prospect is that in the future grapes will command a fair price.

NEVADA.

DAYS ON THE MOUNTAINS.—Editors Press: These perfect spring days are coaxing the grasses from their brown beds, by roadsides and trails and far up the hills. We expect a little snow and frost each rainy season; but roses, violets and pansies, with a very little shelter, can be found all winter in the open air. Ice has formed once by the water tank, but a seedling orange within twenty feet of it was not injured. Higher up the mountain are three-year-old seedlings that have not yet lost a leaf from frost or snow.—Mrs. C. F. Young, Nevada City.

PLACER.

FOOTHILL FARMS.—Editors Press:—A year and more ago, I wrote you a number of letters relating to the advantages of these foothills for fruit growing, etc. Time has already vindicated all that myself and other writers have written concerning this region. So rapid has been the increase of our agricultural population that

nearly all the public land is now occupied by actual settlers. But land, although advancing, is yet cheap. Judging from the progress we are making, I am safe in asserting that the value of real estate will have more than doubled inside of two years. The people are entering largely into the business of orange growing. Three large nurserymen have already established agencies at Auburn for the selling of orange, lemon and other trees. I learn that orders have already been received by agents reaching into the thousands. Last season several hundreds of these trees were planted in this vicinity, and so faithfully have the trees come up to the expectation and admiration of the planters and their neighbors, that almost a general epidemic prevails now for orange planting. Many trees planted last spring can now be seen with from two to six oranges, nearly grown, among their branches.

It is strange how many people with a little capital, who long for a little Eden, will rush to parts where land is held from \$75 and upwards, and invest their all in five or ten acres of land, when they could here obtain 80 acres, and even 160 acres, for the same money—here, where the land is equally good, and the climate all that could be desired. It is now December, and no frosts have come to bite our tender plants. Fall-sown grain is nicely up. The rains of a few weeks ago wet the ground sufficiently for plowing the land. Where are those knowing ones, with whom many of us foothill farmers met within the past few years, who so wisely decried our red lands? I fear many of them are in circumstances far inferior to the average foothill farmer. —H. W. HULBERT, Auburn.

SAN DIEGO.

WOOL.—*News*, Nov. 30: The crop of Mr. Theo. Cameron, of Campo, sold in San Francisco for 15 cents, the biggest price, we are told, that any wool from the county has sold for during this season. Mr. Cameron makes it a point to have his wool well cleaned, and therefore realizes better prices. It always pays to take a little care in such matters, for while burry wool sold at 10, he realizes 15 cents.

SAN JOAQUIN.

THE VALLEY OUTLOOK.—*Herald*, Nov. 30: From a gentleman who has just returned from a trip through Mariposa, Fresno and Merced counties, we learn that the prospects for stock and the next year's crop of grain were never better at this time of the year than they are now. The early rains were sufficient in the foothills in those counties to start the grass, and it has now covered the hills with green and furnishes excellent grazing for stock. The rain also started the volunteer grain in those counties, and the fields are already green with the next year's crop. The summer fallow land is all seeded, and on many fields the sown grain has obtained a prosperous start. The farmers and stockmen in those counties are in anticipation of bountiful yields of wool and grain, and satisfactory increase in the size of their flocks and herds.

BUILDING LEVEES ON PEATY LAND.—*Independent*: On the upper portion of Bouldin island where there is sufficient sediment to permit the use of teams, the levee is being built two feet higher, and the inside slope is greatly increased, while on the lower portion where the soil is a fibrous peat, that will float or burn, a novel plan is being adopted, which we have heretofore described in these columns. It is the invention of Capt. Lawton, chief engineer of the works, and is the result of years of study of the problems involved in peat land reclamation. It consists of a frame bulkhead, made of four by six inch scantling driven into the ground four feet apart behind the levee, supported by braces behind each post firmly driven into the ground and spiked to the uprights. The upright posts are 20 feet long, and are forced into the ground a distance of 12 feet by means of levers. Redwood boards are nailed to them, making a tight fence eight feet high, supporting the embankment of peat placed against it. The work is being done in a very systematic and workmanlike manner, the posts and braces being set with exact uniformity. This plan is looked upon by experienced tulle men as the most feasible one yet proposed for the reclamation of peat lands, and a practical solution of the moot question of how to deal with this very unstable material. If it shall prove as successful as the more sanguine ones predict, it will probably be generally adopted in the vicinity.

NEW PLANTS FROM THE SOUTH OF EUROPE.—*Bulletin*: Returning from Europe Mr. W. B. West brought a number of valuable vines and trees. Among the more important of his list may be mentioned the shipping grape of Almeria, known as the *Loja*. It is a large, white, firm, pulpy variety, which keeps until April or May. It is shipped, packed in ground cork, in immense quantities to other parts of Europe and to the United States. As it is the only European grape that our shippers have to compete with in New York and other Eastern markets, it is important that it should be grown here. Another good shipping grape, a large, white, firm-fleshed Italian variety from the vicinity of Naples, described in some French book as *Doigt de donzelle* (damsel or maiden finger). Of walnuts, he has secured several of the best, including the *Mayette*, a large nut of good quality and very productive, which reproduces itself from seed. The *Tardif de la St. Jean* (late *St. John's*), so named from the fact that the flowers do not put forth until St. John's day, thus escaping entirely the late spring frosts which often blast the crop of other varieties. It is very productive, and is highly

recommended by several French writers. Other varieties embrace *Notre a Bijoux*, so named from the shell of the nut, which is of extraordinary size, being hinged together by jewelers as a receptacle for various trinkets, and the *Praparturiens*, which is remarkable for commencing to bear the third year from the seed. This is not, however, the first importation of the variety. A stock of plants, of the very best Barcelona and Naples filberts, was secured, including seven of the leading kinds, besides a quantity of Neapolitan chestnuts and cork oak acorns for planting. The selection of fruit trees include the best Spanish and Italian oranges from Seville and Sorenta, Malaga lemons and an assortment of the finest varieties of olives, both for pickling and for oil, besides a large quantity of ornamental trees and shrubs.

SOLANO

LEMON GROWING.—*Valley Chronicle*, Nov. 30: Mr. Wm. Cantelow has been quite successful in growing lemons at his place in Pleasant valley. This year he has made some shipments to market. Mr. A. Powell at Vallejo, has a large tree in his garden that has been bearing for three years large and magnificent fruit. Mr. Cantelow's trees were planted in April, 1873, on a hill side, sloping in some places five feet to the road, and without any artificial protection from frost. The soil is very much like adobe. Mr. Cantelow says that until last year, when the trees first bore fruit, he watered them. For the past twelve months, however, he has not done so, but the trees do not look as well as before, and he proposes to resume the former method of irrigation. The fruit varies in size from two and a half inches in diameter to five and a quarter by three inches. The rind is rough, of a bright glossy yellow, and averages one-quarter of an inch in thickness. It is probable that the roughness and thickness of the rind will be reduced as the trees mature. Gentlemen who have had large experience in the foreign fruit trade say that these lemons are of an excellent variety, and there will be an improvement in the yield and quality of the fruit as the trees grow older.

SONOMA.

SOME TURNIPS.—*Democrat*: Mr. J. Orender, whose farm is five miles north of the Corners in Bodega Township, informs us that he recently gathered from an onion patch in which turnips were subsequently planted three turnips of mammoth size, weighing respectively 18 lbs., 22 lbs. and 31½ lbs., and this was not his best land either.

Helps in Home-Making.

Those branches of manufacture which produce material to aid us in furnishing, adorning and beautifying our homes, are entitled to special attention and comment. The home is the foundation of our social system. Build up the home, give it a charm, adorn it, beautify it, let it take a firm hold upon the hearts of young and old, and the home rises to the proper place as a factor in our advanced civilization. We have lately made and furnished a home and our thoughts are naturally running on such themes. In our simple furnishing we have drawn from the stock of one of our largest and most praiseworthy local manufacturing establishments, the California Furniture Company. In making such close inquiries as buyers usually make, we found to our satisfaction that prices had declined in large percentage during the last two years, and that now, one can buy furniture of peculiar beauty and finish for comparatively little money. This we regard as a general benefit, for it brings tasteful designs and beautiful materials, with their manifold refining influences, within the reach of a larger proportion of our population. We found that the California Furniture Company from their establishment on Bush street, between Sansome and Montgomery, are sending out vast quantities of California-made furniture to all parts of the coast, and by means of trading vessels are planting the chairs, tables and other articles of home adornment on the islands of the Pacific, which hitherto have known nothing but the rude devices of barbaric life. Throughout this coast much business is done by correspondence with those who do not find it convenient to come to the city. Prices, descriptions and photographs of designs are furnished, and selections are made which are very satisfactory to purchasers. Of course it is better where possible for the interior purchaser to visit the warehouses and make examination of the many styles offered. We have thought these notes might be of value to many of our readers as the holidays are approaching, and those whose work has yielded them a little surplus will be ready to delight their families by new contributions to the comfort and beauty of their homes. A neat piece of furniture is a splendid Christmas present, as it lasts for years, performing its gentle offices of utility and adornment, and those who are thinking of making such gifts will do well to visit or address the California Furniture Company of San Francisco.

PURCHASING AGENT.—Perhaps some of our readers who need articles from the city, and cannot come to buy them, may be aided by attention to the advertisement of Wheeler Martin in this issue of the PRESS. Mr. Martin is recommended by a long list of our leading merchants, and we doubt not will give satisfaction to interior residents who trust him to fill their wants.

News in Brief.

INDIAN raids in Nebraska.
BUSINESS in silver at London is at a complete standstill.
ANOTHER cable will connect Australia with Europe.
FIRES at Marysville and Pacheco. Also, at Fall River, Mass.
AN International Dairy fair opens at New York next Monday.
THANKSGIVING was not observed to any great extent in Virginia.
COLLISION between Mississippi steamers; one sank; 20 lives lost.
A FRANCO-AMERICAN commercial meeting was held in Paris, Dec. 1st.
THE Commercial Convention met at New Orleans December 3d.
KING KALAKUA's birthday was celebrated on the 16th of November.
THE Porte has suppressed the Turkish Legation at Washington.
THE Bavarian authorities are discussing the question of cremation.
SCHURZ wants the Pimas and Maricopas removed to Indian Territory.
SMITH, FLEMING & Co., of London, have failed. Liabilities, \$14,557,425.
THE Spanish government has decided to expel from Spain all political refugees.
F. C. HAVENS is making arrangements to light Honolulu with gas made by the Union Gas Machinery.
THE number of desertions from the army during the year ending June 30th was 1,678—less than any year since 1873.
THE famous Capitoline Grounds in Brooklyn, N. Y., have been sold for city lots.
THE Southern Pacific Railroad company are laying one mile of track per day in Arizona.
THIRTY-SEVEN passengers are missing from the *Pomerania* and eleven of the crew.
INDIAN COMMISSIONER HOYT denies that the Red Cloud Indians are in danger of starving.
SEVERAL persons were seriously injured in a sham battle at Mount Gilead, O., Nov. 28th.

Local Notes from San Jose.

SAN JOSE seems decidedly thrifty and prosperous, to outside visitors at least. We find that its home industries are constantly increasing. Small manufactories are putting in their appearance from time to time in various parts of the town. The society and climate are favorable, and living cheap, so that nearly all local enterprises here "root where they branch." The Narrow-Gauge railroad affords a new medium of transportation, and obligingly encourages enterprise and improvements in this and other towns. On a recent flying visit to the "Garden City" we made the following hasty notes, which may be extended on some future occasion:

BENNETT, PATTERSON & Co., a well established furniture manufacturing firm, have a well-filled store, No. 422 First street, occupying the first and second floor. Their goods make a fine and substantial showing. They manufacture chamber sets ranging from \$25 to \$400 each, and also parlor sets in good and sufficient variety and at prices to meet the popular demand of the present times and their locality. New styles are added from time to time, and their facilities will be increased hereafter according as the wants of this rapidly growing community extend.

MARTIN'S CENTENNIAL WINDMILLS are being adopted into use by various careful and discerning citizens. As manufacture by the inventor and patentee, they appear to be strong and simple in construction, and consequently durable. They work smoothly and comparatively noiseless, and are guaranteed to give satisfaction. Altman's foundry, under Mr. Martin's shop, near the Narrow-Gauge railroad depot, furnishes the castings from carefully devised patterns. We expect to hear of this invention being adopted in other parts of the State, as it seems to be increasing in popularity in San Jose. Over 30 have been sold during the past few months.

JAMES A. CLAYTON'S Real Estate Agency is deservedly thriving. Knowing Mr. Clayton since 1857, we are pleased to note his success and observe the large share of confidence he maintains in the community which has known him so long and well. His business card in our paper enumerates only a small portion of the numerous real estate bargains his leading agency has to offer in city and country property. Investors in property in San Jose and vicinity have come from nearly every part of California and the Eastern States.

ALTMAN'S FOUNDRY is just completing the iron front for the new hotel at the South Pacific Coast railroad depot in Alameda. The building we understand will be a very creditable one for Alameda. Over 35 tons of iron will be furnished for the front by Mr. Altman, whose work will all be finished in a few days. A good deal of agricultural implement work is done here, besides repairs and general jobbing. The shop was established as at present located near the Narrow-Gauge railroad depot, on the Alameda, about five years ago. The Scott & Watkins gang plow is manufactured here in a manner to give a good deal of satisfaction to purchasers.

H. J. HASKELL, whose carriage factory and blacksmithing establishment is just west of the Narrow-Gauge railroad depot, is one of the substantial manufacturers of San Jose. He attends to business personally, and is diligent in furnishing prompt and satisfactory work to his patrons. He has an assortment of carriages and wagons on hand deserving the first attention of customers in San Jose and vicinity.

T. PINARD, proprietor of the Alameda Carriage Factory, located also on the Alameda, is doing a prosperous business. Fine horse shoeing is a specialty in which he delights and appears to succeed. He is a practical workman, does a general jobbing business, and contemplates decided improvements in his works in the spring, when we may have more particulars to state.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING NOVEMBER 19TH, 1878.

AIR VALVE ATTACHMENTS FOR SEWERS, ETC.—Parker F. Morey, S. F.
WOODEN WELL CURSING—John V. Naas, San Jose, Cal.
WAGON BRAKES—Irwin S. Wright, Centerville, Cal.
SHUTTERS—Wm. Cruse and John D. Isaacs, Oakland, Cal.
BOOT-JACKS—Francis T. Lessen, S. F.
SPRING BED BOTTOMS—Thomas J. Pettit, S. F.
PORTABLE LADDERS FOR GATHERING FRUIT—Luther H. Titus, San Gabriel, Cal.
MIXED PAINTS—Trademark—Yates & Co., S. F.
ELLIOTT'S GREAT DISCOVERY—Label—Dr. John Elliott, Stockton, Cal.

Wanted—Farms to Rent and to Purchase.

I have numerous customers in search of rural property daily applying at my office. Send full particulars. Address: A. Zeelandelaar (formerly with Labor Exchange) Real Estate, Business and Employment Agency, No. 627 Sacramento street, San Francisco. (Furnishes all kind of farm labor at the shortest notice, free of charge to employers.)

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavillion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

The Plowing season setting in, farmers are reminded that they can get the most reliable and competent help (free of charge) at the old employment office of A. Zeelandelaar (formerly with Labor Exchange) 627 Sacramento St., San Francisco.

POPULAR MUSIC.—Make your homes merry and popular with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. The RURAL PRESS can offer to introduce you there.

SUBSCRIBERS to the *California Agriculturist* now receiving the PACIFIC RURAL PRESS will please at once notify this office, direct by letter or postal card (giving their name and address) whenever they wish the paper discontinued.

SAN JOSE is the position as a popular place of residence on this coast, and James A. Clayton is its leading agent for the sale of city and country real estate. See advertisement.

A FAVORITE YOUTH'S PAPER.—The *Youth's Companion* of Boston has steadily grown in public favor for more than fifty years, and is now one of the most admirably conducted papers in the country.

THE celebrated Troy (N. Y.) shirts can be found at Palmer Bros., No. 726 Market street, San Francisco. They keep a full and complete stock, laundried and unlaundried, of men's and boys' sizes of the above make.

WHEN A LADY wants a cloak or suit for herself or child and feels in doubt where to buy it, we cheerfully recommend her to go to Sullivan's, No. 120 Kearny street, San Francisco, where she can always find the cheapest and best assortment.

A FLOURING MILL is wanted at Reading, the head of railroad transportation in Shasta County.

Mining & Scientific Press Patent Agency.

THE MINING AND SCIENTIFIC PRESS PATENT AGENCY was established in 1860—the first west of the Rocky Mountains. It has kept step with the rapid march of mechanical improvements. The records in its archives, its constantly increasing library, the accumulation of information of special importance to our home inventors, and the experience of its proprietors in an extensive and long continued personal practice in patent business, affords them combined advantages greater than any other agents can possibly offer to Pacific Coast inventors. Circulars of advice free. Address, DEWEY & CO., Publishers MINING AND SCIENTIFIC PRESS AND PACIFIC RURAL PRESS, 202 Sansome Street, S. F.—1878.

FORTY ACRE FARMS.

In offering the Reading Ranch for sale in sub-divisions, I am disposed to accommodate the interests of all classes of desirable settlers, I therefore offer (besides large tracts) to sell farms (in favorable locations) of from 40 to 100 acres, at from \$20 to \$30 per acre. Semi-tropical fruits, corn, vegetables, and all kinds of grain and grasses, (including alfalfa,) will grow well without irrigation on these lands. The Oregon Division of the C. P. R. R., and a brisk growing town are near the land on the west, while the Sacramento river is near at hand on the east.

For further information of the Reading Grant, see my advertisement which appears from time to time in this paper. Address the proprietor on the premises,

EDWARD FRISBIE,
ANDERSON, SHASTA COUNTY, CAL.



A New England Farm Ballad.

In an old New England town
Lives a farmer, Thomas Brown.
Hard his hand, but not his heart,
And in life a noble part
He has borne with purpose true;—
Let me tell his life to you.

Tom Brown's father was a man,
Had he lived as he began,
Would have prospered on his farm,
Bounded by the country's charm;
Meadows fair and acres broad,
Watered by the generous Lord,

Fruit and produce of the field,
Yearly in abundance yield;
O'er his hills fat cattle roam—
Peace and plenty in his home;
'Round his hearth are children fair—
Health is wealth beyond compare.

From Brown's farm, not far away,
Is the store of Aaron Gray;
Here the farmer smokes his pipe,
Talking crops, till crops are ripe;
Here, in Aaron's snug store,
Farmers count their profits o'er,
And by flick'ring candle light,
Hear the news on 'lection night.

In his cellar Aaron kept
Casks in which disaster slept;
For the liquors that he sold,
Swamped the farmer's hard-earned gold;
Aaron Gray, by greed impelled,
Soon Brown's farm through mortgage held;
From strong drink what power can save?
Brown soon filled a drunkard's grave.

'Midst her grief, the widow's joy
Was Tom Brown, her eldest boy;
From the farm-house forth they walked,
'Poverty before them stalked;
But Tom vowed that his right arm,
Should redeem his father's farm;
He was young, yet well he knew
What in life he meant to do.

To his mother Tom had said,
"Lean on me your weary head,
And my first desire shall be
To provide a home for thee;
'Neath the roof we home shall call,
Water only used by all,
Till our old home be restored—
Water only on its board."

Years have flown, and Thomas Brown
Leads the farmers of his town;
He has kept, with sacred truth,
All the promise of his youth;
Happy, with a manly pride,
For his mother to provide;
He who keeps his mother's trust,
Heaven has blessed, and always must.

She who was his choice in life,
Honored by the name of wife,
Lent a true and willing hand
To redeem the homestead land;
What with labor they could store,
Bought the farm he till'd of yore;
And the old home was restored—
Water only on its board.

Now the feast, to farmers dear,
Comes again, as once a year;
And, in these New England towns,
Is no brighter home than Brown's;
'Round his hearth, by health caressed,
Are the forms he loves the best;
Happy household joys untold
Dwell within its cherished fold;
For the old home is restored—
Water only on its board.

—New England Homestead.

Her Rose Garden.

Being a Tale of Two Young Married People,
and their Gardening Mishaps.

[Written for the RURAL PRESS by CHARLES H. SHINN.]

CHAPTER II.

The long rains and chilly nights of winter were past. The broad Salinas valley was a network of toiling teams passing to and fro across the furrowed fields, and brawny, sun-browned men were going forth to sow the fruitful grain, whose golden harvests should feed the distant nations. Each rising and each setting sun lit the naked, billowy heights and rugged barriers of the lofty Gabilands, or glinted through the wooded passes of the Santa Lucia range. From light to light, along each slope, and in each deep ravine, the fresh, bright grass was awakening, little flowers budded in shy silence; sparrows, robins, and the cheeriest of small "chippies," twittered and sang. Mrs. Bailey found that, after all, it was a very pleasant corner of the brown, homely earth—this little valley wherein they had cast their lot.

The little garden had prospered amazingly. It might have been because the kindly nurseryman, pleased with Mrs. Bailey's ingenuous and lady-like note, had selected unusually thrifty and fine plants to fill her order. It might have been owing to the careful preparation of the soil, which John spaded three feet deep one afternoon, picking out the stones, and mixing well-rotted manure through the entire depth; or, perhaps, it was because every evening they took a walk in what John called "Marian's rose garden," standing side by side on the narrow path, and discussing an infinitude of things, from the budding spirea, to the twilight sky, and the dumb, silent hills. Possibly, indeed, all three of these reasons helped to make the

roses bud, and the carnations blossom long before the winter rains were fairly over.

"But John," said Mrs. Bailey, "my heart aches when I think of those poor flower seeds I bought, and there they lie now in my work-basket!"

"It is not your fault, my dear," he answered. "We have had rain, and consequent mud, for weeks. I am sure the seeds will forgive you."

"I want flowers, John, not forgiveness," said Mrs. Bailey.

"What are flowers but forgiveness?" asked John shyly. John Bailey, like many other quiet men, had deep in his heart a hidden craving for the beautiful things his early trainings had taught him to despise. Flowers, birds, running brooks, merry voices, blue skies, multitudinous ocean waves—all these had in reality a deep and pure effect upon his mind, although he never spoke of it, and was called a heart-headed, practical sort of a man. When he married Marian she had brought a new freshness and purity into his life. Her sympathy with his moods was a perfect marvel to his slower comprehension. Her simple, yet intense love of nature and art, awoke answering chords in his own thoughts. His language improved, his eyes brightened, his step grew more elastic; daily, although "only a renter," he became more distinctly a leader amongst his neighbors. Was it wholly the country air and the outdoor toil, or was it the unconscious home influence of his sweet wife?

Mrs. Bailey welcomed John's shyly expressed poetical remark, with a quiet and happy look, dearer to him than any words could have been, and, searching in the angles of her octagonal work-basket, brought out the tiny packets of seeds, tossing them, with pretty vehemence, over the table.

"Now, John, are you a botanist, or a florist, or any other is?" said she; "who is to tell us which to plant first, and how to plant it?"

"Catalogues, papers and common sense," said John, sententiously.

So they found a stack of papers and searched them for floricultural hints, clipping out items here and there; they got into a merry mood, popped some corn, and adjourned the subject till the next day.

In the morning it was decided, over the breakfast table, that all the seeds, except the canary-bird vine and the aster, might be sowed at once—the sweet peas in the open ground, and the others in small boxes from which they could easily be transplanted. The solemn conclave also agreed that the soil of the garden was too stiff and adobe for successful seed planting, and that some sand and decayed leaves must be had.

John went out and hitched up. Then he drove around by the barn and put a large box in the wagon.

"I thought you were going to mend the pasture fence to-day," said his astonished wife.

"No, I am going to haul driftwood from the river, he answered.

"O, yes! and nice leaf-mold for the seeds! That is splendid!" So she put up his lunch, and watched the wagon disappear in the great wrinkles of the ocean-like valley.

It was rather lonesome to know that John was going further each minute; but she did up her housework valiantly, and sallied forth, under the inevitable sunbunnet, to plant her sweet peas. Bailey & Co. did not own a trowel, but she took the family spade, and a broken piece of steel from one leaf of somebody's wagon-spring. This last, picked up on the main road, was properly curved and pointed, nor was it unreasonably heavy.

She prepared a little row extending across one end of the garden, and close to the patched-up fence. Then she sat down, and, tearing off one corner of the fancy-colored paper bag, let the seeds slip into her lap. There they were—a pile of little brown affairs; bundles of cells, fibers and closely-coiled germs; abiding place of beautiful life, and of most marvelous energies. One by one she counted the items in her possession.

"Fifty-eight seeds, and a demoralized paper bag," she announced, *sotto voce*.

"Now," she soliloquized, "my trench is three inches deep and eight feet long. I would like to scatter the seeds about an inch apart; but perhaps, if I give the plants good culture and plenty of water, they will tiller out like John's champion wheat, and I may even have a few left for another idea of mine."

So 32 seeds were put at very precise intervals of three inches and covered with the utmost care; the row was mulched with well-decayed straw, and there were 26 seeds left. Near the middle of the garden there was an unoccupied space, and here Mrs. Bailey drew a circle of two feet in diameter and planted the rest of the seeds at regular distances around the circumference. These also were mulched, and she began to wonder what she could find for the peas to climb on, there being, as she knew, no twine in the house.

"How stupid of me," she sighed regretfully, "not to have asked John to bring home an armful of willow brush!"

That afternoon, when the wagon came home, the first thing she saw was a huge and well-tied bundle of straight willow sprouts.

"What are those for?" she queried.

John laughed and looked quizzical. "What do you want them for?" he said.

"Just let me have a few, and I'll show you," she averred. So he drew out a handful and she crossed them on the ground in imitation of X lattice work.

"There," she said, appealingly, "can you guess what I mean?"

"Why, that were easy enough," said John, "I used to brush garden peas when I was a boy, and I fancy sweet peas are not more particular."

Mr. Bailey had spent nearly an hour in selecting those osier-like rods, but his wife's quiet, "How very thoughtful you always are, John," was a more than sufficient recompense.

A few days afterwards the willow wands were woven back and forth in a graceful lattice work over the expected sweet peas. The warm, rich leaf-mold and sharp sand which Mr. Bailey had brought were carefully mixed in small, shallow boxes, the seeds were sown and the boxes were placed in the corner of the garden, and well shaded.

Mrs. Bailey planted the seeds, and this was the way she did it: Each little box was about a foot in length and breadth and three inches deep, with holes cut for drainage. She mixed the rich, leafy earth, which Mr. Bailey had brought, with common garden soil, and rubbed it in auld pan till it was as mellow as an ash heap. Then she added about one-fifth part of pure sand, mixing it again. Then she filled the boxes and pressed the soil evenly with a piece of board. Then she sowed the seeds, a box for each kind, dropping them at regular distances apart, and covering them very lightly. Mr. Bailey happened along in time to help her carry the boxes out to the garden and cover them with a moist cloth, to promote germination.

[To be Continued.]

Children's Rights, No. 2—The Rescue.

[Written for the RURAL PRESS, by Mrs. C. I. H. NICHOLS.]

Fruit-curing being ended, I am at leisure to tell how the cast-off wife of our neighbor D. got possession of her little ones. Armed with a statement, signed by a dozen of our best citizens, I packed my knitting work and reputation of "correspondent of an Eastern paper," and went to Lawrence, where our last Territorial Legislature was to convene the following week, to ask for the mother a divorce and custody of the children. The reader may ask, why she did not petition the courts held in our immediate vicinity. To do so she must have waited three months in cruel suspense, and before a decision of the case could be reached, D. had only to cross the Missouri State line, a stone's throw from his door, to get beyond its authority.

Besides all this, there were in the Legislature several gentlemen who had been members of the Constitutional Convention a few months before, and voted for the provision securing to mothers equal rights with fathers to their mutual offspring. I felt secure of their influence. Immediately after the organization of the House, a resolution, offered by one of our Wyandotte county members, to grant no divorce bills where minor children were concerned, was adopted by a unanimous vote. Checkmated? No, the case was one appealing to the best sympathies of men who make a point of "backing down," when they find themselves on the wrong track. Next day the right member offered the petition, and was seconded by another whose doing so was a guarantee of its merits; and, without a negative vote, it was referred to the Judiciary Committee. This committee, after due deliberation, informed me that they had decided to report a bill for divorce and custody of children, only on testimony to the alleged facts, taken in compliance with the requirements of courts authorized to grant divorces. "And now," said a gentleman of the committee, after I had signified my acceptance of the terms, "you will be detained here, probably, till near the close of the session, waiting for your affidavits from the East. Wouldn't you like a clerkship?" And a clerkship I had; six hours in the enrolling office, enrolling and examining enrolled bills. In the second week of the session the Senate Clerk—a fellow-boarder—was called away by sickness in his family. During his week's absence, I received the minutes and made up for him the reports of proceedings of the Senate, outside my office hours. On his return I was appointed Assistant Clerk, and filled six hours of the winter evenings with the duties of this office. I think this was the first Legislature to appoint a lady clerk, and perhaps I am the only appointee that has filled an office in each branch at the same session.

Nobody I am sure was ever happier in being able to meet expenses; for I had no money, and the poor mother would need all her's in the far-away home she had rented and furnished ready for her little ones.

Three days before adjournment, the Committee having received abundant evidence of the facts in the case, reported the bill called for. And in 36 hours more, it had passed by a unanimous vote of both Houses, been enrolled, and received the signatures of the Governor and Secretary of State. The Secretary declined the usual fee for a copy I requested, remarking that it had "cost the woman enough already to get her children." Bless his heart, and he an old bachelor! It seemed as though everybody helped, only the man who didn't vote on the bill, "because he had offered the resolution against granting any divorces." But his sympathy with the mother compelled him to confess, that "if there had been any doubt of its passage, he would have voted for it and worked for it." I said everybody helped; but

no, there was a hitch in the Senate. The adjournment was so near, that many bills would miss a final vote. So I had arranged in both Houses, with those whose business it was for a quick passage; and in a brief note requested the Speaker of the Senate to provide against any indirection that might prevent its passage in good time for the Governor's signature.

When the bill was reported for passage in the Senate, a member moved for its indefinite postponement, stating that Mr. — (a lawyer from our neighborhood) said "there must be some mistake about it, as D. had a good trade and was able to support his children, whose mother had deserted them in the East." The Speaker put a member in his chair and moved and carried a reference of the bill to a special committee, and I was notified that the committee would meet me in the enrolling office. D.'s lawyer was in the office copying an enrolled bill in which he was interested, I called him to the conference. It appeared that the testimony in the case lodged with the House committee had disappeared. Happily, I had in my satchel several affidavits which had come to hand subsequently to the report of the bill in the House, and a private statement signed by half a dozen of D.'s neighbors, who had fed and clothed the children for months. The legal gentleman endorsed the veracity of said neighbors, formally withdrew his objection, and aided us subsequently in getting possession of the little ones, by communicating the result to the friends of the mother in time to anticipate their abduction by the father, who, armed with rifle and pistols, left us no alternative but his arrest on complaint of the mother. Before he could send to his lawyers out of town for bail, which he could not obtain in his own vicinity, mother and children were spirited across the country to the St. Jo railway, en route for the State of Maine. An hour later—just as the moon was rising—the Prosecuting Attorney with his associate attorney and sheriff and posse arrived, but finding no clew to the whereabouts of the children left, having arranged, as we afterward learned, for a secret surveillance of the premises of those concerned in the rescue. Three days later we were all eight of us arrested and taken to the county seat for abduction of the children and after a three days' trial, the justice decided that "the allegations of the writ were not proven;" nevertheless he "would bind the prisoners over for trial at the County Court to test the constitutionality of the divorce!" Alas, for the "test!" The Grand Jury refused to find a bill!

All this happened at a time when freedom was the dead line of Kansas politics. The attorneys managing the case circulated the news that they "had all the philanthropy of Q. booked for the penitentiary." Q. was Republican—the lawyers—ahem! But in the Legislature I met as much sympathy, and was equally indebted to men of either party, for assistance in procuring the mother's right to her children.

Household Education.

[Written for RURAL PRESS by W.]

It is a common saying that every child thinks his father the wisest man in the world. This is very natural; as parents are their children's fountains of knowledge. To them their children dream for anything they want to know, and by them they are generally satisfied. But every wise parent has occasion to say now and then, "I don't know my dear." The surprise of the child on first hearing that there is anything that his parents do not know, fixes the fact in his mind. When he has once discovered that his parents have something more to learn, he becomes aware, and this also ought to be fixed in his mind, that their education is not finished; and that it is their business, as it is his, to learn something more every day as long as they live.

So much for knowledge. The case ought to be as clear to him with regard to goodness. It is not enough that in church he hears that all men and women are sinners. These things may set him thinking; but here will be or ought to be more light every day to clean up his ideas. The same parents who honestly own to their child that they are ignorant of things about which he questions them, will own to him that they are not nearly so good as they wish to be. Thus is the truth opened to the feeblest and smallest mind that education has still to go on, even when people are so inconceivably old as children are apt to think their parents. Teach them to know they are never too old to learn.

A CHILLY-LOOKING mosquito, with a generally discouraging air hanging about him, came slowly in and inquired feebly where he could find the man who had charge of the scientific society's specimens. Then he wiped the frost off the end of his bill, remarking that his season was about over now, and he thought he would like to be stuffed; and went wearily down the stairway coughing hollowly, and whipping his front legs for warmth, as he went up Fairfield avenue in search of the curator.

"KNOWLEDGE is power." Not always; the boy that gathers up his fishing tackle and empty basket as the sun is sinking in the west knows that his mother stands washing and waiting for him at the garden gate, and the knowledge that the kindling wood remains uncut, is such a source of weakness to him, that to march along and whistle "What is Home Without a Mother?" is an utter impossibility.

This and That.

Reading Advertisements.

[Written for the RURAL PRESS by MRS. RANCHER.]

As to finding fault with the PRESS, which the editor invites us to do, when a paper comes to us week after week full of matter that we take solid comfort in reading; when we find that its information is reliable; when we feel sure that from one cover to the other there is nothing harmful in it; we naturally conclude that a. this does not happen by chance, but by constant painstaking. Now it is fair to suppose that editors are human, so when they have done well perhaps a word of encouragement and praise may be quite as grateful to them, as to the rest of us poor mortals. There is one feature we especially commend, and that is the advertisements. Why we look upon them as part of the reading matter of the paper. Scarcely a week passes but what we see something advertised that is not only just what we want but what we need; though we wish the price was oftener inserted, that one might judge whether or no the article comes within one's reach.

Notes on Dressmaking.

As we cannot in good conscience scold the editor, we want to unburden our mind by scolding men and women generally. The men need a vigorous hauling over the coals, because they have failed to discover that in many essential points the fashion of female adorning is improving. At least, such a thing as a dress with low neck or short sleeves, even at a ball, is quite unknown; while in winter ladies attend parties in dresses that are thick and warm.

But (now for the ladies) on the subject of calicoes women have surely become quite crazy. The sole aim when buying seems to be "how many yards can I get for a dollar?" Merchants sell, 12, 15, yes 20 yards for 100 cents, and what is the result?

First goods are so cheap that dresses which are continually in the wash and on the ironing table, are trimmed without stint; thereby causing much hard work. Then the fabric is so poor that very soon it gives way, and the work of making is almost lost. Let us get gingham and prints that will wear, even if we get but four yards for a dollar, and can have but eight yards in a dress.

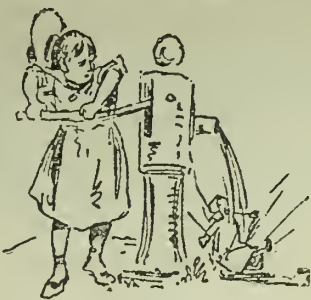
It is true that many abominations still exist. Pull-backs are perhaps pulled further back than ever. Bonnets are hideous, etc., etc, etc. But look at the improvements.

For a number of years the huge masses of false hair or jute, according as the purse of the wearer allowed, that were once piled and pinned upon the head, have given way to a neat and becoming coil, or twist, or braid, which, if not entirely the wearer's own, is never cumbersome or unhealthy. Then it seems to us, that tight lacing has not prevailed so much as it once did. Certainly thick soled shoes are the rule in damp weather. These and other reforms should be duly credited to us as progressive steps.

A MODEST REQUEST ANSWERED.—The latest sentimental ballad is entitled "Give me the home of my childhood." Bless your soul, we'd do it in a minute, but—why, haven't you heard? Old Tadgers closed out three mortgages on it in 1867 and 1868, and the next year it was sold for taxes, it was seized for debt the summer following, then your oldest brother claimed that it belonged to his wife, and brought suit in her name to recover, and before that was through they found an old flaw in the title and in trying to straighten that out it transpired that your grandfather had no Government patent on it at all, but had stolen it bodily from the Indians; and now two half-breeds have brought suit to recover the property as the heirs. The house was burned down about two years ago and the neighbors have used the fences for kindling wood; your wife's cousin is trying to get hold of the lot and your half-brother jumped the property one night, put a little shanty on the alley corner, and is now in possession. There doesn't seem to be much show for you, but you might file your papers, buy a lawyer and sail in. —*Burlington Hawkeye.*

DAILY BATHS.—As a rule people doing hard physical labor do not bathe as much as they should. The daily bath is to them quite as important as to any class. It requires but a few moments to take it, and when followed by friction it fortifies the skin against colds and rheumatism more than almost anything else can do. A rubber mat which turns up at the edges to catch the water, a couple of quarts of pure water, a common sheet large enough to envelop the whole body, and plenty of friction are all that is necessary. One room in every farmhouse should be kept for a bath-room and supplied with heat and these simple conveniences. Proper bathing keeps the muscles supple and lactic.

A YOUNG man, hired as a clerk, was told by his employer that all his clerks slept at the house, and that it was closed punctually at 10 o'clock every night. "Oh, don't apologize," said the youth, "I don't care what time it is closed, if it's only opened early enough in the morning."



Giving Her Doll a Bath.

Young Folks' Column.

What a Little Boy thinks of the Press.

EDITORS PRESS:—It is said straws show which way the wind blows, and that coming events cast their shadows before. To guardians and parents, who hold the destiny of children in their "purses," I wish to state a fact: In this town there is a little 12-year-old lad living out. Since receiving your beautiful paper, the RURAL PRESS, we have lent odd numbers to him to read, on condition that he should have clean hands, read attentively, return them in good order and tell us something about their contents. The little man is so interested, that he is working extra hours cutting manzanita and green pine wood, expecting to earn the price of the RURAL PRESS as a Christmas gift to his mother and stepfather. Bless the dear boys and girls, whose pure natures always responds to the beautiful and the useful. If parents and guardians only would be persuaded to give them half a chance to have something—if only one hen, a pig or tree to be their "very own," and then would lay on a white spread table by a shaded lamp the clean, bright numbers of the RURAL PRESS each week and invite and encourage the little fellows to read and think and talk about how to take the best care of their little beginnings—do you not believe these lads and lasses would have less interest in ten-cent trash, and more interest in home? Yea, verily! How can the people be awakened and enthused to try to save their own children is an important question.

MRS. C. F. YOUNG.

Nevada City, Cal.

A Buckeye Toy.

"See, papa! ain't they pretty?" and, so saying, little Mabel held out to her father an apronful of shiny-coated "buckeyes."

"Yes, Mabel, they are very pretty. But what are you going to do with so many of them? what are they good for?"

"Why, papa! they are good to play with; and all the children get lots of them every day."

"But don't they make anything out of them, such as a basket, a whirligig, or a top-sawyer?"

"Yes, papa, some of the boys make little baskets, and those horrid whirligigs that go around both ways at once, and keep hitting you on the head. But I never heard of a top-sawyer; what is it?"

Then her father explained to her, that, in sawing up large logs into boards without the aid of machinery, long, heavy saws, with a handle at each end, are used. One man stands in a saw-pit, or sort of hole under the log, and takes hold of the lower handle of the saw, while the other man, who is called the top-sawyer, stands on top of the log, and works the other end of the saw.

"And now I will make you a top-sawyer out of buckeyes," said her father. So saying, he took a very round nut from the pile, and cut holes in it for eyes, nose, and mouth. That was the top-sawyer's head. A larger nut served for the body, which he fastened to the head by a match sharpened at both ends.

Two more matches in the proper places, served for legs; and two flat pieces of soft wood, cut into the right shape, were used for arms.

The saw was a thin strip of flat wood about five inches long and half an inch wide, with one edge cut in notches to look like saw teeth. This was fastened between the hands with a piece of wire, so that when the little man stood up straight, the saw pointed to the floor, and went three or four inches lower than his feet.

A piece of wood, with two nuts stuck in it for a balance-weight, was then fastened to the lower end of the saw, in such a way that the nuts came directly under the feet, and several inches below them. The little man was then placed on the table, quite near the edge, so that the balance-weight hung under the table; and, by means of a gentle push, he began to sway back and forth on his feet, his saw going up and down, just as if he had been a real top-sawyer, with an assistant down in the saw-pit.

DOTING mother; "Yes, I shall be happy to give you the wages you ask; but I shall expect you to love the dear children." Nurse: "I shall be very happy to do so, ma'am; but of course that would be an extra!" —*Funny Folks.*

GOOD HEALTH.

Treatment for Intermittent Fever.

Perhaps some of our readers in malarial districts may profit by the following treatment described in the *Sanitarian* by Dr. J. R. Black. He says an orthodox doctor is very apt to treat a chronic intermittent thus: A mercurial cathartic to clean out the abdominal viscera, then quinine in large doses, and if this does not succeed, then in larger and yet larger, to destroy or neutralize the hypothetical malaria in the system. Cases have I seen by the score who had received such treatment for weeks and months unavailingly, who had taken quinine and iron until they were, as they expressed it, almost blind and deaf, and yet the disease persisted, with very brief cessations. As a hygienic therapist, and as one who has had a large experience with chronic intermittents, I unhesitatingly affirm of this latitude that scarcely a case of intermittent fever need ever become chronic, and that even when so, proper management will hold the symptoms under control until the tendency is wholly overcome. The outline of the method is as follows: Inquire carefully into the history of the case, and whether acclimated or not, directing special attention to each of the abdominal organs, and, if much deranged, administer the best active corrective at once. Then anticipate the next paroxysm with 12 grains of quinine, divided into three doses, beginning its administration 18 hours before the time of the expected chill. Repeat this amount of quinine every seventh day for four consecutive weeks, but at no other time, except when the patient's indiscretion brings on an irregular paroxysm. During the intervals administer daily gentle remedies appropriate to correct the functions that show the most derangement. These remedies should be such as will keep the organs mainly at fault up as near as possible to the standard of healthy action, and no more, never allowing the secretions or excretions of any organ to sink far below the healthy standard, nor causing them to rise much above it. The diet should be strictly hygienic, and so also of the exercise, not permitting the vital energy to be spent in toil that should be devoted to recuperation. To guard against external variations of temperature, especially in the unacclimated, flannel should be worn next the skin. The grand condition of success lies in the method and means for keeping all the abdominal organs during every day, and for several weeks, up to the standard of healthy action, and thus triumphantly raise the health above the ague point. Quinine is invaluable for the arrest of periodicity, but nothing more. By these means my success in treatment has been immediate and invariable, even in those cases in whom improper management had led to serious derangement of the liver.

DANGER OF FLIES IN THE EAR.—Dr. A. J. Pedlor, of Truckee, Cal., writes to the *Pacific Medical and Surgical Reporter* a description of a case which fortunately is of rare occurrence. He says: On the 11th of June, I was consulted by John R., a stock drover, who complained of excessive pain and violent noise in his left ear. He said, "A fly entered my ear five days ago, but I got it out in two minutes." Ten hours after removing the insect, pain set in and rapidly increased. The old-time remedies of filling the ear with warm water, oil, etc., failed to remove anything, and gave no relief. Inserting a speculum, and illuminating the ear with a Troeltsch mirror, the cause of his suffering was plainly visible. A number of moving worms, or maggots, were seen imbedded in the canal, close to the drum. Careful use of the syringe for one hour resulted in removing one maggot, about three lines in length. The ear was then filled with carbolyzed almond oil, containing morphia sulph. A cotton plug being inserted, the patient went to bed. During the night, four more maggots were dislodged, and the following morning I removed the sixth and last one by aid of the syringe. This last one was fully six lines in length. Three came away dead—the effect of the carbolyzed oil. These wriggling usurpers were evidently hatched from eggs deposited by the "fly," during its brief sojourn in the ear. The drum was intact, though intensely hyperemic. Daily use of astringent drops, and protection from the air, speedily restored the parts to health.

TREATMENT FOR A SPRAINED ANKLE.—Dr. Erasmus Wilson says: "We all know that there is nothing more painful than a sprain of an ankle; it will lay a man up longer than the fracture of a bone, and he may recover with a very weakened joint. Accompanying a country medical man in his rounds, he told me he had made a great discovery in the treat of sprains. 'The way I cure a sprain,' he said, 'is this: I take some lard; I warm it, and rub it into the sprain half or three quarters of an hour. I then take some cotton wool and wrap around the joint and put on a light bandage. The sprain, which would have taken many months to get well, gets well in a few days—certainly in a few weeks—without any ill effects or after consequences.'" Wilson adds: "I tried this treatment and found that it succeeded admirably."

EATING when tired is very injurious. Always arrange your labor so as to have a short resting-spell both before and after every hearty meal, especially if old or feeble.

DOMESTIC ECONOMY.

Economy, Squash and Duck.

[Written for RURAL PRESS by EDWARD BERWICK.]

From what I see occasionally I am inclined to think that Californian cookery is not an economic art. Too much goes to the swill-tub. Too much grease is used in spoiling good meat in the irrepressible frying-pan.

Of all the indigestibles that ramp-o'-nights in the dyspeptic stomach fried grease is commander-in-chief. Probably more than three fourths of the meat sold in our villages is cut into "steaks," and more than half these steaks are grease-soaked in the frying-pan. Possibly the objection to roasts is the wood and time used in cooking, and the distaste for a cold joint next day, if family is small. For those who do occasionally enjoy a roast I have an original dish to recommend.

Savory Squash Pudding.

Take a fair sized bowlful (say one quart) of the remains of cold baked squash (Hubbard or Marblehead for choice), one coffee-cup of flour, one teaspoonful salt, a little pepper, one and one-half pints of milk, and two eggs, if you have them. Beat together flour, squash and eggs, add milk and seasoning, and stir thoroughly. About 40 minutes before your dinner hour pour the fat out of the baking pan from under your roast, set the roast on a trivet, and pour in your squash batter. Return to oven and bake a nice brown color.

Squash Toad-in-the-Hole.

Take of above mentioned squash batter as much as you want, cut up cold meat, or steak, into pieces, two inches square and season well. Butter a baking dish put in your meat pour the batter over and bake about one hour. This may be varied indefinitely by using sausages, quail, or any kind of meat; or a layer of potatoes, bread, cracker, or remains of cold vegetables may be introduced.

Duck.

Woven duck, brown duck, such as men's overalls are made of, I'm writing about. Farmers like "G. K. M." who dispose of their penful of fat hogs in fattening a houseful of hungry urchins may be glad to have a hint that such brown duck can be made into very nice tidy suits for young children; and have the commendation that they are hard to tear and stout to wear. My wife makes up suits for my little urchins, and, with the addition of a tie of red homespun braid under the collar, the look is well enough and the wear is everlasting.

HYGIENIC BISCUITS.—An exchange gives a recipe for making a biscuit which shall accord with advanced hygienic ideas concerning the composition of flour, etc. On a baking board put two pounds of oat meal and two pounds whole wheaten flour, ten ounces of good salt butter, one-half ounce carbonate of soda, one-fourth ounce tartaric acid, and four ounces of sugar. All should be weighed carefully; the butter should be the best that can be procured, and the soda should never be used without the acid. Mix all together. When the butter has been well rubbed into the flour, add buttermilk, mixing with the hand till of a pasty consistency. Knead just as little as possible, to keep the dough light. Roll out; cut with biscuit-stamp to the required size, prick with marker, and fire in a moderately quick oven. In the absence of a stamp cut with a lid; and if no marker is at hand use a common fork. In rolling out the biscuits little or no fresh flour should be used; otherwise the brownish color of the biscuit will be lost. When firing in the oven, biscuit trays should be used. Any wireworker will make one. If these directions are followed, a most palatable, agreeable, and nutritious bread will be produced. If cooled in an open basket, and afterward stored away in tins, these biscuits keep sweet and short for a considerable period.

PEA BROSE.—This a true Scotch dish. It has the merit of being easily cooked. It is easy of digestion, palatable and nourishing. It is made from pea meal. Put three or four tablespoonfuls of the meal into a soup basin; over this pour boiling water, stirring with a fork or spoon. When the water has been absorbed, pour on more, stirring always while adding the water until of the consistency of paste. Add a very little salt and a small bit of salted butter; stir again and the brose is ready. Sup with milk. As this is a nourishing and cheap dish, no one should give it up because he happens not to like it at the first trial; rather vary the quantities of salt and butter and give it another trial.

BREAD PUDDING.—Take a deep pudding dish and butter it; cover the bottom and sides with thin slices of bread, white or brown, then a layer of pared and cut apples or pears, or both mixed in any other fruit you fancy; then sprinkle some sugar; a layer of bread in slices or bits; then fruit; and so on until the dish is full. Lay thin slices of bread over; fill up with any fruit juice or water, lacking this; cover with a plate, and bake in a slow oven four hours. Hot or cold it is most delicious. Any sauce would spoil it.

GRAHAM CUP CAKE.—Unbolted wheat meal, two cupfuls; buttermilk, one cup; molasses, half-cup; butter, quarter of a cup; eggs, two; soda, half a teaspoonful. Bake half an hour.



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SAN FRANCISCO:

Saturday, December 7, 1878.

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The Week.

Bright, sunny days come in flocks like white-winged fowls. The air is full of cheering warmth. Men going forth to their daily avocations throw back their shoulders and upward turn their faces toward the genial sun. As they meet, the peerless days are themes for praise, and the words of appreciation press closely upon affection's language. All those who dwell in towns and cities, and find their work favored by the unbroken sunshine, are led to new tributes to the glory of California's winter.

But the picture has two sides. While the bright, dry days delight the idle and the industrious in certain lines of work, they hang rather heavily upon the thousands of our farmers who long to speed the plow and cast the seed for a long growing season. Some there are who anticipate a lack of rain for the season, but most observers are merely restless at the delay, knowing that delayed rains mean rush of work and wasteful haste in efforts to do in a week the labor of a month. The tardiness of the rains also casts depression upon certain branches of trade, for those who supply farmer's needs must wait until the beginning of actual work calls for new tools and supplies. But there are many days to come. We have but just turned into December and the season is still before us. It is fine weather to put everything in trim for work and comfort on all our ranches, and to finish up needed improvements. Let the days thus be employed and the labor for production will be at hand ere long.

Pedagogic Plunder.

The sound of bribery and corruption has fallen to the minor notes. Long enough has the diu of purchased congressional eloquence, of purchased judicial decision, of purchased action in all departments of trust, grated on the ear. The people must be tired of the "heavy villain" in the drama of public affairs, and the disclosures of the last few days furnish the lighter shades of human depravity for popular contemplation. And yet we are not sure that it is indeed so light as at first it appears. There are some petty transgressions which strike directly at the foundation of all virtue, truth and integrity. Let us see if such be the outcroppings of evil to which we allude.

On the day before the regular examination for teachers' certificates in this city, the *Evening Bulletin* printed in full the questions which had been prepared in the office of the State Superintendent of Public Instruction, and sent thence to the several counties of the State under seal, to be opened only on the day of the examination. This publication demonstrated that the questions which the State Superintendent sends out are not guarded as they should be, but that persons, other than the boards of examination, get possession of these State secrets and use them to extort money from candidates for teachers' certificates; because, by having opportunity to study the questions beforehand and memorize answers thereto, any one can gain the coveted certificate even though wholly devoid of proper general qualification. This publication of the questions threw the examinations overboard, and has been followed by protracted examination by the city Board of Education to discover, if possible, by whose agency this abomination has been enabled to flourish. These examinations are still in progress and it is impossible as yet to determine who is the guilty party, who has betrayed the trust of the State department of public instruction.

It is probable that farther investigation will disclose this fact, and we shall have opportunity to expose for public execration the base trafficker in public trusts. Enough has already been discovered to determine that the evil is not a recent one, but that for about ten years it has been possible, by the villainy of some one, to secure, in advance, copies of questions which the public supposes are held from all eyes until the time of the examinations. It has been shown that in this city, if not elsewhere, candidates for examination have been crammed with answers, and made to pay high a price for the same by unprincipled parties connected with our public school system. The result is, that certificates have been secured by persons who could not have obtained them by fair examination, and the public money has been paid for instruction to those who corruptly purchased their title to teach, and the public service has thus been outraged.

We have called these minor notes of depravity in view of the heavy dirges of corruption which have been heard from Congress, from our public works, and from our public institutions of trust and savings. And yet it is hard to conceive of depravity which is more densely evil in its tendencies and influences than that which invades our public schools, and which forces us to entrust our children to the care of corrupt and ignorant persons whom we fondly believe are of good moral character, and wise in the themes on which we seek instruction. Our little ones are taught by us with all diligence to respect their teachers, to look to them for moral and educational guidance during the hours that they are away from us. Our youth are enjoined to obey and respect these exponents of the State's desire to train them up in principles of good behavior and of general culture. Now we are forced to see that, in some cases, we have taught respect for persons who have gained their trusted places by the basest means—who have entered upon their work with fraud, corruption and deception. We send for truth to those who have acted lies; for honesty to those who have, by the aid of coin, stolen their certificates of qualification; for wisdom to those who are confessedly ignorant and incompetent. Could there be a more startling disclosure?

This matter has not yet been probed to the bottom, but we trust it may be. It is the more serious from the fact that the evil has been of long continuance. Let something be done now which shall check the evil for a generation at

least. Let the brand of infamy be placed so plainly upon all who have been concerned in this evil work, that it shall serve as a wholesome warning to all who would profit by the unholy traffic. Let the investigation go on. Let us all know who are the people's foes, and who, for petty plunder, would turn our public school system into a hotbed for crime, corruption and incompetence.

"Wolf Teeth" in Horses.

EDITORS PRESS:—Is there such a thing as "wolf teeth" in horses, and do they affect the eyes? I have a horse with a sore eye and some say it is caused by a "wolf tooth," and a veterinary surgeon laughs at the idea.—JOHN KELSEY, Berkeley, Cal.

The connection of "wolf teeth" with affections of the eyes is of long standing in agricultural traditions. It has been the subject of much study and investigation, and the result has been in approval of the position taken by the best veterinary surgeons on the subject, namely, that the connection is imaginary. Some time ago Dr. D. E. Salmon, of North Carolina, who is now a member of the United States Commission for the investigation of the diseases of farm animals, wrote a paragraph upon this subject for the *Rural New Yorker*, which reviews the facts in a careful manner and pronounces against the belief which has long been held by some people. We quote Dr. Salmon's statement as follows: "Wolf teeth" are small, supplemental teeth, called from their position pre-molars; they are very common, but in a majority of cases drop out when the first pair of milk molars are replaced by permanent teeth or soon after; they are, consequently, generally seen in young horses. As horses are quite subject to superficial inflammation of the eyes while teething, from the increased flow of blood to the head at this time, these teeth have become associated with such inflammation and are considered its cause. In the South and West, where "big head" is prevalent, these teeth are also often charged with originating the bony enlargements which constitute this disease. As a consequence, horse-owners look upon "wolf teeth" as they would upon a rattlesnake—as something to be feared and destroyed as soon as possible.

The removal of these teeth causes little pain when properly done with forceps, but when they are punched out by placing a bar of iron against them and hitting this with a heavy hammer, as is usually the case, it not only causes severe and useless pain, but it so frightens the animal as to sometimes make it vicious for life. Wolf teeth have no effect on the eyes directly or indirectly, nor do they cause the enlargements of bones of the nose attributed to them. Dr. Horne, of Janesville, Wis., who formerly believed that these teeth caused blindness, was induced to examine the mouths of a large number of horses, to satisfy himself of their influence. The result of these examinations, to say nothing of the almost unanimous opinion of the veterinary profession, founded on many years of experience, should convince any intelligent man. Of 1,073 animals examined, 216 had wolf teeth, and of this 216 all but one were perfectly free from any disease of the eyes or any other part; of the whole number of animals examined, 37 had affections of one or both eyes, but with the single exception mentioned, they did not have wolf teeth. Such an observation made by one who believed the contrary, cannot be doubtful evidence, and as it confirms what veterinarians have always taught, it should prove conclusive.

FLORIDA FRUIT IN EUROPE.—Our orange growers may be interested to learn that the Floridians are pushing their oranges direct to England and Switzerland, by a new line of vessels called the "Florida Dispatch Line." A report from the recipients states that the consignment arrived in excellent order, and were pronounced the finest oranges they had ever tasted. One of our Florida exchanges think that such evidence from Switzerland, so near the shores of Italy, in favor of Florida fruit, is an acknowledgement of its superiority that should be disseminated.

ON FILE.—"Condition of Soil and Evaporation," C. C. H.; "Salmon Berries and Others," J. G. C.; "Santa Barbara Notes," B. W. C.; "Yield of Leutills," I. W. A.; "Salmon Berry, etc.," I. A. W.; "The Citrus Family at Los Angeles Fair," J. H. S.; "Fresno Co., No. 2," E. K.; "Carp Culture," L. D.

QUERIES AND REPLIES.

"White Redwood."

EDITORS PRESS:—I send you to-day some white redwood, and a twig of the green. It grows close to my place, 40 miles below Monterey, on the coast. There is only a little of it, and I only know of one other place where it grows. Can you tell me why it grows white?—W. B. Post, Monterey, Cal.

The specimens are very beautiful. We have heard of this singular growth before, in Sonoma county, about 15 miles from Santa Rosa. There it was reported growing as suckers at the base of a tree which had the usual foliage. It was also seen in the form of a white branch 60 feet in the air. So far as we know, there is no demonstration of the cause of the phenomena, except the general ground of *usus naturæ*, to which is attributed all unaccountable freaks of vegetation. Many efforts have been made to propagate the white redwood, but without success, so far as reported. It would be a plum if any nursery man could propagate it.

Cure for Rattlesnake Bite.

EDITORS PRESS:—Mr. J. J. Partington, a neighbor of mine, had a cow bit on the neck by a rattlesnake. The cow's head and neck swelled up to the size of a flour barrel; the cow could hardly breathe. He got some rattlesnake weed, which grows anywhere where there are rattlesnakes, and boiled and made the cow drink two quarts, and also bathed her head and neck with the same, and within 12 hours the swelling had all gone and the cow is well. The weed will cure the rattlesnake bite both on man and beast, and I have heard it said, to cure the bite of a mad dog. If you wish, I can send you some of the weed. It is dry, as there is none green now.—W. B. Post, Monterey, Cal.

If our correspondent can bear it in mind to send us a plant, pulled up "by the roots," when it is in blossom, we should be under obligation to him.

Legal Questions.

Although we are willing to exercise due diligence and application to secure the information desired by our readers, we cannot undertake to answer legal questions. There are so many "ifs" and "ands" necessary to apply the law to special cases, that only a skilled lawyer can successfully prescribe for them. More than this, there are so many laws of local application in the different counties, that our answers on general acts would be erroneous. On legal questions it is better to consult some lawyer of good standing, who has his interests at stake, upon the wisdom of his advice. We advise our readers to take as little law as they can get along with, and get that from some qualified dispenser of the bitter herb.

The Formation of Crust.

EDITORS PRESS:—What causes some soil to run together and form a hard crust after a rain or rains?—W. P.

It is owing to the fineness of the particles which form the soil. The water cements them together and the drying out of the surface leaves them closely adhering. Coarse particles, as sand, cannot approach each other so closely, consequently they are not cemented by water and when the water dries out they fall apart, instead of adhering.

WIRE-BINDERS AND THE MILLERS.—We notice by Eastern newspapers that the millers are making statements adverse to the use of wire in binding grain, as is done by the new self-binding reapers. According to an article in the *Minneapolis Tribune*, the millers state that the short pieces of wire cut their "bolting cloths," get between the millstones and wear their surfaces unevenly, and also destroy their "brush machines." They claim also that bran and feed containing pieces of wire have been sold to farmers, to the injury of the stock. These claims are worthy of attention and investigation. Have any of our local millers or stock feeders had trouble of the kind described?

THE LIVERMORE VALLEY.—Wm. P. Bartlett, proprietor of the *Livermore Herald*, has just published a pamphlet of some 40 pages, upon the resources of Livermore valley. There is much information relative to the history, development and present capabilities of this very prosperous portion of our country. The compilation has been done in a very comprehensive and systematic way, and reflects very great credit upon the editor.

CONGRESS assembled at Washington December 2d. In the Senate 14 members were absent, and in the House 64.

A Sheep Protector.

We illustrate on this page a device which a South Carolina shepherd, Capt. C. Gilbert, of Bucksville, South Carolina, has contrived for protecting sheep from seizure and injury by dogs. The value of the protector depends, of course, upon the disposition of the dog to seize his victim by the neck. We have seen sheep seized otherwise, but probably there is a considerable percentage in favor of neck seizure, and to this extent the protector may be invaluable. The inventor, Capt. Gilbert, testifies that his sheep were safe amid a pack of evil curs, and thus gives his own testimony in favor of his invention: Fig. 1 shows the protector in proper position around the sheep's neck. Fig. 2 shows the button-head properly drawn into the small part of the slot, and the protector firmly locked by the latch-button, which holds it permanently fast around the sheep's neck. Fig. 3, with Fig. 2, shows the relation of the button and lock-latch to the other parts.

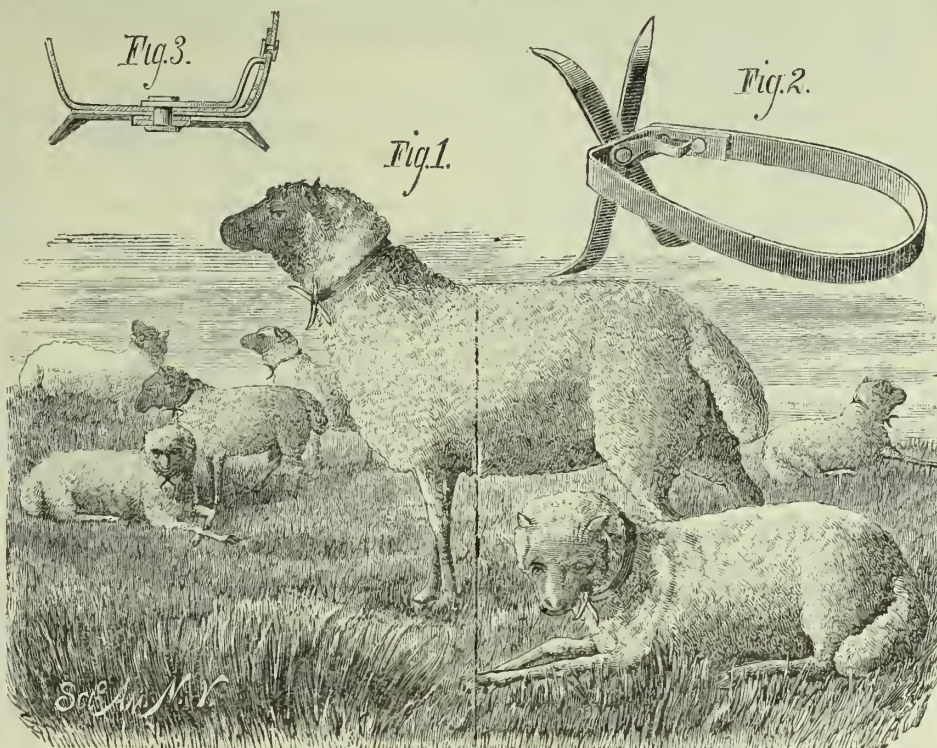
The invention consists in a metallic collar or neck-band, which is fastened together by means of a slot and rivet or button, and is provided with cross pieces, having pointed ends. This is the sheep protector proper. The band or cross pieces may be stamped with the owner's name and the year it was placed upon the sheep, so as to keep a perfect record of every member of the flock. It may also be painted in colors by which one may at a glance distinguish his own from every other person's sheep at a distance, without the difficulty often experienced of ascertaining the ear marks. This band also comes into use when the animal is to be caught for shearing. By means of a hook somewhat resembling the ancient shepherd's crook, the sheep is taken by the collar and gently controlled by the shearer.

The serious losses which flock-masters suffer by the inroads of worthless dogs are well known. Laws and dog taxes have availed something, but the evil is still of alarming extent. The most careful statistics that could be gathered by the Agricultural Department at Washington, show the present estimate of sheep in the United States to be 35,740,500 head, valued at \$30,603,062. This is a problem worthy the attention of inventors, as the law-makers have failed thus far to solve it. For this reason we are disposed to show the device which the South Carolina flock-master has brought forward, so that those interested may examine and test its efficacy. Those who wish to know more of the protector can obtain particulars by addressing Thomas W. Beaty, Conwayboro, South Carolina.

SUBSTITUTING CORN FOR BARLEY.—The *Mark Lane Express* sympathizes with English barley growers, because their "most hopeful cereal" is being replaced by Indian corn, in uses for which barley has held a proud supremacy heretofore. A correspondent of the *Brewers Guardian*, says that maize has been successfully malted and that beer or porter brewed from one-third maize and two-third barley-malt is equal in every respect, if properly brewed, to that made from barley-malt alone, and is more full to the taste. Verily our native maize is proving a most aggressive grain in Europe. While many foreigners are learning the excellence of Yankee "corn bread" and "Johnny cake," others are making beer of corn malt. Our exports of Indian corn have grown to immensity during the last few years, and there is still much room for increase. Let the American grain win the world!

THE examination of applicants for State teachers' certificates has been postponed until December 11th, in consequence of the recent expose of the manner in which the documents have been heretofore obtained.

GONE TO STUDY THE HONEY MARKETS.—We learn from the *Ventura Signal*, that Mr. R. Wilkins has gone to England to dispose of a large amount of honey shipped some time ago by sailing vessels from San Francisco, by parties in Ventura county. Mr. Wilkins expects to be absent several months, and will investigate the honey business thoroughly while gone, both in this country and Europe, and will endeavor to find a regular market for the immense amount of honey raised in Ventura county. We



DEVICE FOR PROTECTING SHEEP FROM DOGS.

trust Mr. Wilkins may succeed in his errand, and find it an easy task to fill every mouth in Europe with the sweets of our California apiaries. Many will watch with interest for the results of Ventura's experimental cargo.

HONORS TO LAND RECLAIMERS.—We read in a foreign exchange that decorations have been bestowed by the King of Belgium upon M. J. de Smedt and M. J. Coels, in recognition of their valuable services to the cause of agriculture. The first-named of these gentlemen has,

ever, being very expensive, and requiring a very large space for operating.

A company has recently been incorporated in this city, which has acquired from N. J. West, of London, the sole and exclusive right to manufacture and sell on the Pacific coast his world-renowned ice-making and refrigerating machines, which, although well and favorably known in Europe, has never been introduced on this coast until now. These machines obtained the first-class prize medal at the great exhibition in London in 1862; the prize medal at Vi-

Manufacture of Ice.

It has been found by experience that in most localities ice can be manufactured by artificial means, cheaper than natural ice can be cut and shipped to the cities where it is sold. This is especially true on this coast, where the larger cities are remote from the lakes and other places where ice forms, and where transportation is expensive. Various devices have been invented for the manufacture of ice, most of them, how-

by the Western Shore Ice Co. To this apparatus a very plain and simple steam engine is attached for working the air pump. This is made direct-acting, by which means the use of all belts or gear wheels is avoided. Where, however, a separate motor exists, the machine may be had without the steam engine, in which case there is, of course, a proportionate reduction in the cost.

A one-ton machine of this description will manufacture clear ice in blocks of any desired thickness, from three inches to four feet and upwards, at a cost, we are informed, of one quarter of a cent per pound.

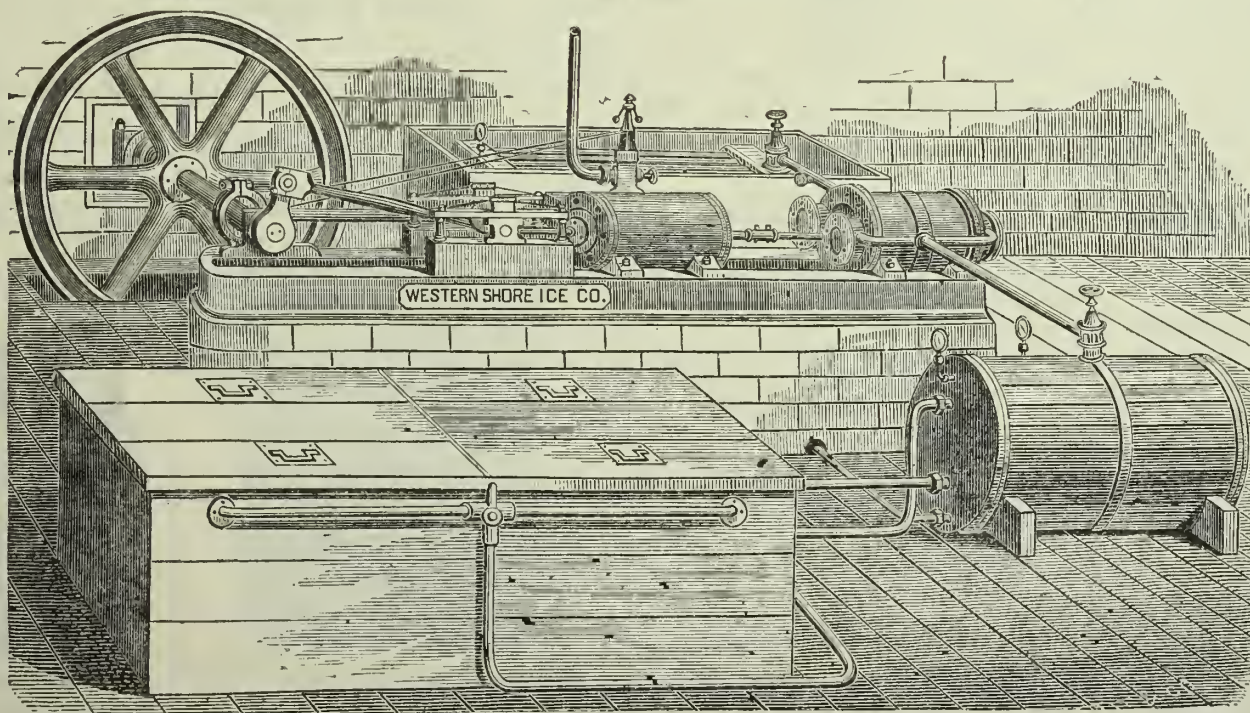
A twenty-ton machine will make the same description of ice at a cost of one twentieth of a cent per pound. The company state that where power is already on the premises, the cost of manufacture will be less than one-half of the above figures.

Many valuable improvements have been recently made, and the apparatus is acknowledged to be one of the most complete and economical ice-making machines in the world.

Among the various other purposes for which this new patent machinery is valuable, are the cooling of air or liquids, preserving meat, fish, vegetables, fruits, etc., cooling hospital wards, theaters, dairies, mines, and for all purposes where a low temperature is desired. The success attending the introduction of the apparatus is proof of its superiority. The most eminent brewers in the world, including Allsop & Sons, Truman, Hanbury, Buxton & Co., and Guinness & Co., have adopted the system and have 11 of these machines of the largest kind in use, while 38 of them are employed in various other breweries in Great Britain. All machines sold are accompanied by a guarantee.

These machines may be used to advantage at our deep mines where large quantities of ice are consumed. They are also very useful in dairies, as the air may be kept at an equable temperature in dairy rooms, and at any desirable coolness. The Western Shore Ice Company are prepared to supply refrigerating machines of a capacity for cooling from 5,000 to 50,000 cubic feet of air per hour to 30° Fahr. Circulars and further information may be obtained by applying to the Secretary of the Western Shore Ice Company, No. 330 Pine street, rooms 61 and 62, San Francisco.

NOTE ON LEMON GROWTH.—We find in the *Florida Agriculturist* an account of experience with the growth of the lemon tree, which will be of interest to our growers in comparison with their own experience. A Florida orchardist says that he obtained a young lemon tree nine years ago, and has lost eight years in trying to make it grow into a tree form, by cutting away the suckers as they appeared. Last year he gave this up in despair, and was going to dig up the bush and throw it away, but at the intercession of his wife, let it remain, and took no further care of it, allowing it to bush out. This year he has been rewarded for his neglect by getting a crop of 400 fine lemons, good size, and fine flavor. He has now arrived to the conclusion that a lemon tree should be allowed to grow as nature dictates, and a



WEST'S ICE MAKING AND REFRIGERATING MACHINE.

within the last 30 years, converted more than 6,000 acres of wastes into fruitful, arable and pasture land, and the second has devoted himself to similar useful pursuits for a period of more than 20 years. California could furnish the Belgic king a good many names for decoration if he should propose to extend his honors for land reclaiming.

THREE medals were awarded to California wine manufacturers at the recent American Institute fair in New York.

ONE of the *Pomerania's* boats has been secured, with a bag containing \$25,000.

enna exhibition of 1873; and have been supplying ice at the Paris exposition. Apparatus has already been constructed under these patents, which is now in successful operation in Great Britain, in India, and in New York, equivalent to the manufacture of a million of pounds of ice daily.

The company organized here is called the Western Shore Ice Company, which is now prepared to supply these machines to hotels, restaurants, clubs, breweries, mines, dairies, country towns, and all manufacturers and consumers of ice on this coast. The accompanying drawing illustrates one of the patent transparent block-ice making machines, manufactured

knife should never be allowed to touch it. His lemon bush has spread to a circumference of several feet, and the limbs, as they rest on the ground, grow and form fresh plants. The *Agriculturist* adds that a lime will grow into a tree, but some of the best varieties of lemons will not do so, they are like the citron in that respect; they will shed their superfluous wood of their own accord.

THE public debt statement for November shows an increase of \$3,214,242—caused by the Halifax award payment.

THE commission of Mrs. Thompson, as Postmistress at Memphis, has been signed by the President.

Lands for Sale and to Let.

LOMPOC

Temperance Colony.

45,654 49-100 ACRES.

Cheap and Desirable Homes.

TERMS OF SALE.—25% cash, and the remainder in eight equal annual installments with interest at 10% per annum, or full payment and deed immediately.

Rich Soil and Healthful Climate.

Located in the Western part of Santa Barbara County, California, embracing 40,000 acres of the Finest Bean Land in the State; as high as 3,700 lbs. of Beans to the acre have been raised the present year, while 3,000 lbs. to the acre is not an uncommon yield.

DAILY MAIL

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E. H. HEACOCK, President.

IRVING P. HENNING, Secretary.

November 6th, 1878.

California Land Agency,

NO. 276 FIRST STREET,

San Jose, Cal.

Has on hand and is in constant receipt of Maps and Charts of

Public Lands for Location.

For from \$25 to \$50 I will select and survey for you a good claim, giving full details of its quality and adaptability to different kinds of agriculture or stock raising. I locate Pre-emptions,

Soldier or Sailor's Homesteads,

TIMBER, WOOD OR DESERT LANDS,

And have also numerous

Tracts of Cheap Lands For Sale.

For further particulars apply as above to

C. C. RODGERS,
Land Agent and Surveyor.

FARM FOR SALE.

\$4,000.—Two Hundred Acres of Land in Mendocino County.

Thirty miles from the county seat, and 20 miles from the Coast, one of the healthiest localities in the State, especially for consumptives. The place is fenced off in six different fields. Plenty of water and timber for all purposes. A good orchard. Vegetables of all kinds grow well. A good dwelling with six rooms, ceiling and painted inside, good frame barn, granary, storehouse, smokehouse, etc.

Also, Six Hundred acres of grazing land, well fenced, three miles from the above farm, plenty of water and timber for all purposes. Price, \$2,500.
For further particulars, address "B. T.," care of DEWEY & CO., PACIFIC RURAL PRESS office, San Francisco, Cal.

STOCK RANGE

TO LET.

Several thousand acres, at a very low rate. Apply soon to EDWARD FRISBIE, Proprietor, on the Reading Grant, Anderson, Shasta County, California.

A Good Dairy Ranch For Sale

On Bear River, Humboldt County, Cal., containing 400 acres of as good grazing land as any in the State. New Dairy and Dwelling House. The land is well watered, and plenty of timber for firewood and shelter, and well fenced. I will also sell with the ranch 100 head of choice dairy cows and five horses. Price, \$13,000, one-half down, the remainder on easy terms for one, two or three years. Apply either in person or by letter to RICHARD JOHNSTON, Post-office address, Myrtle Grove, Humboldt County, Cal., or to R. J. JOHNSTON, No. 1,324 Howard Street, San Francisco.

BEE RANCH FOR SALE.

One of the best ranges in the State. At present working 375 stands Italian Bees. Apply for particulars to D. W. McLEOD, Riverside

TRUNKS! TRUNKS!

JOHN NORCOVE,

Manufacturer, Importer and Dealer in

Trunks, Valises, and Traveling Bags,

At prices to suit the times. Repairing promptly done.

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The New Be keepers' Text Book

By N. H. and H. A. K. O. The latest work on the Apia, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, postpaid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.

BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 323 Front street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each. Lambs, \$15 each.

POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importers and Breeders of Thoroughbred Poultry. Eggs for hatching.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

BURBANK & MEYERS, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Dogs, etc. Eggs for hatching. Send for price list.

SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Iowa's Cattle, Hog and Sheep Labels.

A. J. TWOGOOD, Riverside, Cal., Importer and Breeder of Pure Bred Poland-China Hogs.

W. & J. ROBINSON, Hanford, Tulare Co., Cal., Importers and Breeders of Thoroughbred Berkshire Swine and Pure Brown Leghorn Fowls. Trios a specialty.

Poultry.

THOROUGHbred POULTRY.

116 Acres

DEVOTED TO

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POULTRY.



Unlimited Range.

Healthy Stock.

Largest Yards on the Coast.

Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.

Safe arrival of Fowls and Eggs Guaranteed

Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents.

Send stamp for price list. Address M. EYRE, Napa, Cal

EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

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At Gray's No. 105 Kearny Street,

On receipt of the amount in postage stamps, any of the following pieces will be mailed, post-paid:

BABY MINE, (Song).....Smith, 35 cts
BABY MINE, (Schottische).....Stuckenholz, 35 cts
EMMETT'S LULLABY, (Piano Solo)....Far West, 35 cts
LITTLE TORMENT, (Schottische)....Far West, 35 cts
THE SNOW LIES WHITE, (Song).....Harriott, 35 cts
ALCANTARA, (Galop).....Chauncey, 75 cts
GOLDEN GPHIR, (Galop).....Yankee, 50 cts

Send for complete Catalogue of Music and Descriptive list of the



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This popular City of Homes is the largest business center south of the Golden Gate. It is surrounded by the most thickly settled farming district in the State—owing largely to the combined advantages of rich soil, mild and healthy climate and nearness to market. Cheap and healthy living, with favorable facilities for transportation, favor the commercial and manufacturing interests of the enterprising citizens of this early settled and appropriately termed "Garden City."

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Alameda Carriage Factory,

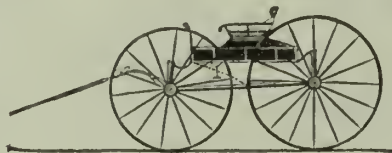
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Blacksmithing of all kinds Neatly and Promptly done.

Horseshoe'ng a Specialty.

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At the Lowest Rates.

Corner of Alameda and White Streets,
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Finch's Horse Medicines.

FINCH'S CURE ALL—Warranted to cure all sores, old or fresh, on man or beast.

FINCH'S CELEBRATED HORSE RENOVATING MEDICINES—Used by Montgomery Queen for many years.

Testimonials.

Mr. S. FINCH.—Dear Sir:—I have given your Horse Medicine a fair trial, and find that it works satisfactorily, and feel fully warranted in recommending it to the public.—Geo. B. McKee, San Jose, October 10th, 1878.

I fully concur in the above testimonial, having given it a thorough test.—S. A. Bismor, Pres't S. J. & S. C. R. Co.
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I hereby certify that I have sold Finch's Cure All in Michigan for 10 years, and it has always given good satisfaction. And for the last three or four years have sold it in San Jose, and can truly say that it is one of the best preparations for healing all manner of sores on man or beast I have ever sold.—S. H. WAUNER, Druggist, San Jose, October 10th, 1878.

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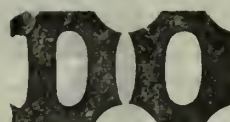
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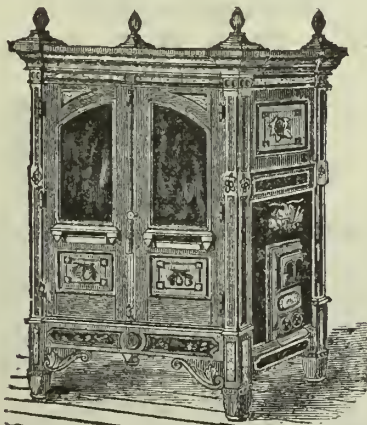
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Cloverdale, November 18th, 1878.

JOHN ROGERS & CO.,**General Stock and Sale Yard,**Corner of Market and 9th Streets,
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ALSO, DEALERS IN HAY AND GRAIN.

Parties consigning Stock or Grain to us can rely upon prompt sales and quick returns.

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There is a good chance in Tehama County for a skilled man who will go to work and start a nursery. The location is one mile from Vina station, in Tehama County, in a good growing region of country; the land is first-class and water abundant. A man is wanted, with good references, who will start a first-class nursery in partnership with the owner of the land. Address,

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A three-fourths bred CLYDESDALE STALLION, sound and kind, will work single or double, weight, 1,600 lbs., is offered for sale by the undersigned. For terms address

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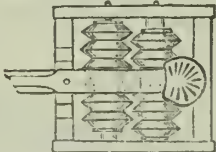
For Irrigating Purposes.
The best in the World.

No machinery, and easily worked. One horse works two (2) 8-inch pumps, raising water 50 feet with 5-foot stroke, at the rate of 12,000 gallons per hour. For particulars send for circulars. Manufactured at the SACRAMENTO FOUNDRY, corner Front and N streets, Sacramento, Cal., by

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Self Regulating
WINDMILLS.
Pumps & Fixtures

These Mills and Pumps are reliable and always give satisfaction. Simple, strong and durable in all parts. Solid wrought iron crank shaft with double bearings for the crank to work in, all turned and run in babitted boxes. Positively self regulating, with no coil spring or springs of any kind. No little rods, joints, levers or balls to get out of order, as such things do. Mills in use six to nine years in good order now, that have never cost one cent for repairs. All sizes of Pumping and Power Mills. Thousands in use. All warranted. Address for circulars and information,

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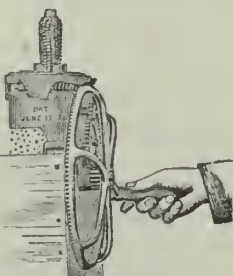
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This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the best and most desirable Gang Plow in the world. Send for circular to

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This is the cheapest and best Windmill in the country. Has 75 fans, 10 feet in diameter.

Price, \$75.

Every mill is warranted. Before you buy, send for a circular, giving full description to

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EVERY PACKAGE WARRANTED.

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The most wonderful discovery of the Nineteenth Century.

A California Production.

Retail price, 25 cts. and 50 cts. per package, and 25 cents for each insectifier. These will be sent by mail on receipt of price, either in money or stamps.

Directions for use with each package.

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Life-size Pictures taken at reduced prices to suit the times. Call and see for yourselves.

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Prices always the Lowest, and the best assortment.

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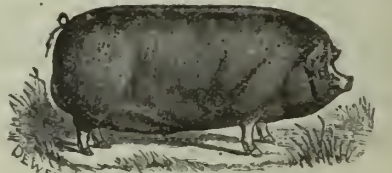
My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

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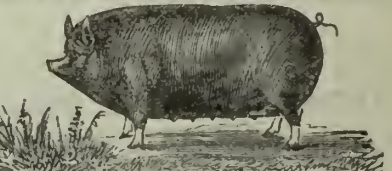
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As a horse medicine it is superior to any liniment ever invented. For RINOSORR, SPRAIN, SWEENEY, CALLOUS LUMBS, and all old sores, apply freely so as to blister, from three to five days in succession, and in four or five days, if not cured, repeat as at first. SPRAINS, STIFF JOINTS, BRUISES, WINDGALLS, and all slight ailments, apply a small quantity so as not to blister. Saddle Sores, Cuts, and all other sores where the skin is broken, mix the liniment half and half with any kind of oil, and apply in moderation.

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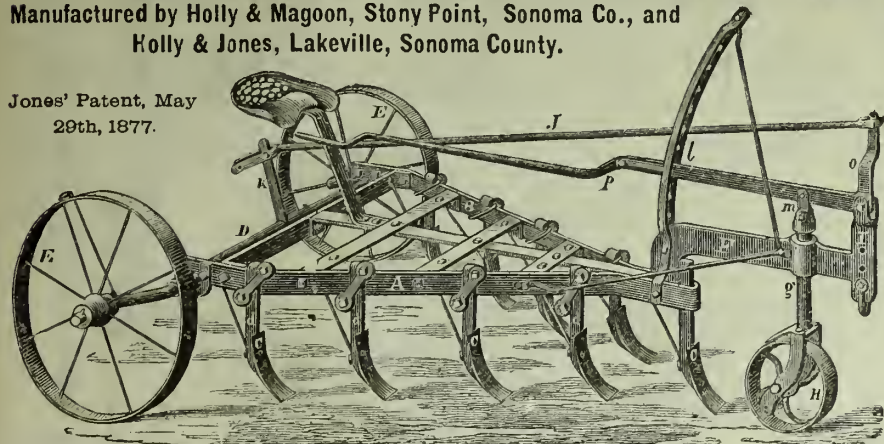
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SHEEP WASH,
\$2 Per Gallon.

After dipping the sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

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Manufactured by Holly & Magoon, Stony Point, Sonoma Co., and
Holly & Jones, Lakeville, Sonoma County.

Jones' Patent, May
29th, 1877.

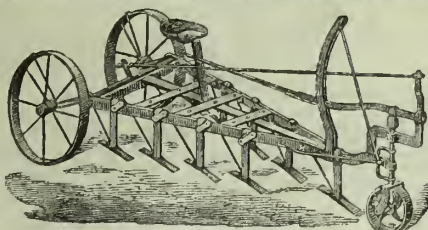


This Cultivator is made by practical men, after years of experience, and better meets the wants of California farmers than anything before offered.

Made of the best material (with wood or iron frame), and warranted in every respect.

Prices
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For further information address the Manufacturers, or M. C. HAWLEY & CO., Agents, San Francisco and Sacramento, Cal.



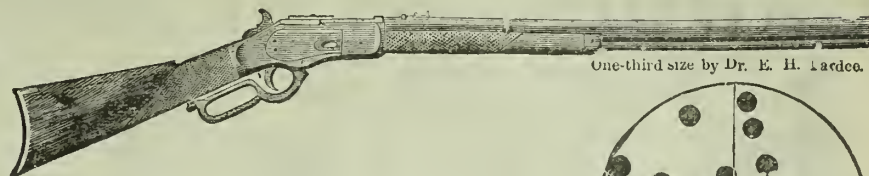
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Is a decided improvement, to which we wish to call the especial attention of those who would secure the best and most durable.

Our STRAIGHT CHISEL CULTIVATORS (patent applied for) are self-sharpening and made of the best cast steel, with an improved method of fastening to the standard, approaching perfection itself.

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One-third size by Dr. E. H. Lardner.

The Strength of All its Parts,

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The Rapidity of its Fire,

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Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set, 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carabines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carabines, model 1868. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

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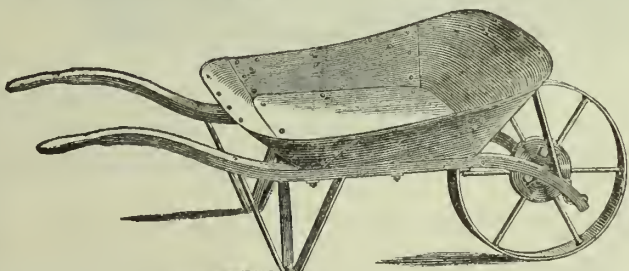
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IRON PIPE.



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The Strongest Barrow Made. These barrows are made by Superior Workmen, and of the best material. All sizes kept constantly on hand.

Lap-Welded Pipe, all Sizes, from Three to Six Inches. Artesian Well Pipe Also, Galvanized Iron Boilers, from Twenty five to One Hundred Gallons.

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1st.—Owing to its being plaited (not twisted) it is stronger than any other Wire made. All other Wires, and especially close twisted Wires, are weakened; IT MUST BE SO, because the fiber of the metal is broken in twisting.
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3d.—We use STEEL made by the Siemens & Martin process, for Barbs, the best in the world. Our Wire is made entirely by Machinery, and is perfectly uniform.
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In consequence of spurious imitations of LEA AND PERRINS' SAUCE, which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

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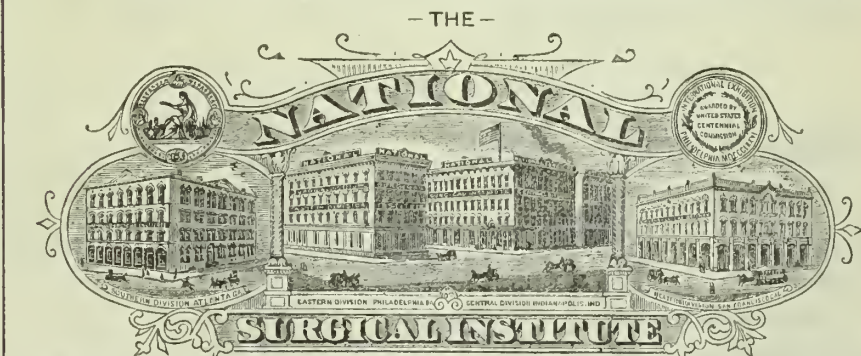
which is placed on every bottle of WORCESTERSHIRE
SAUCE, and without which none is genuine.

Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper.
Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London,
&c., &c.; and by Grocers and Oilmen throughout the World.

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Is the largest Institution of its kind on the Continent. The Medical and Surgical Staff comprises the best talent in the country. There have been many cases of human deformities successfully treated than by any similar Institution. More than 50,000 cases have been successfully treated. Diseases which are made a specialty—Curvature of the Spine, Hip Disease and all Diseases of the Joints, Crooked Limbs, Club Feet, Piles, Fistula, Nasal Catarrh and Paralysis. Send for Circulars and References to the

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In order to introduce our fertilizers, and to prove that we are using nothing but pure materials, and being positive that when properly used they will double the yields of most crops, and at the same time enrich the soil, we are willing to furnish small lots, of 100 pounds and upwards, at low prices.
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For Strength, Light Draft and Ease of
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We Guarantee Satisfaction, and ask no
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Our improved Sulky has taken the lead wherever introduced, and is the only Plow that has given entire satisfaction in reclaiming the Tule Lands of California. Over 100 of these Plows are in use on the Islands of the Sacramento and San Joaquin Rivers. In introducing our Improved Gang, we are prepared to demonstrate by Actual Field Tests that we have the best Gang Plow in this Market.

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All kinds of Wire—iron, steel,
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WIRE ROPE and CORDAGE

Of every kind on hand or Made to Order.

To Dairywomen and Stockraisers.

OIL CAKE MEAL.

Best Feed Known for Live Stock.

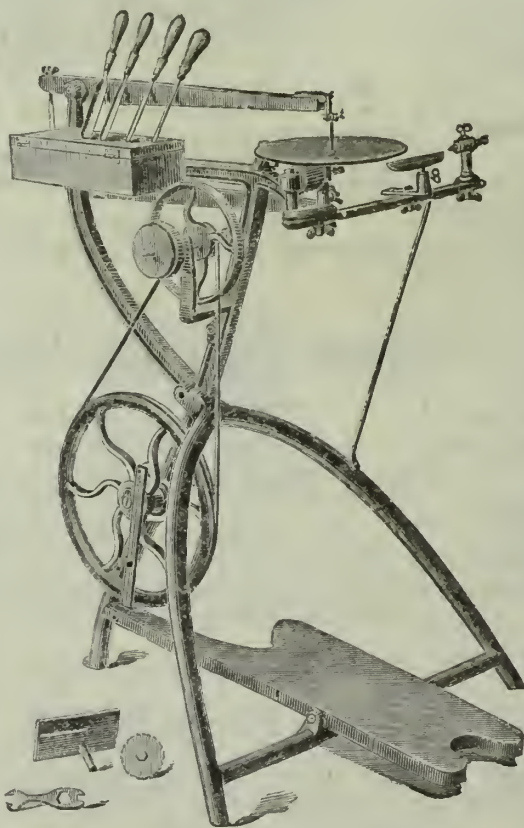
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For MILK COWS, it increases the quality and richness of the milk, to a far greater extent than any other feed known. For BEEF CATTLE, its fattening properties are unequalled. For HORSES, a small quantity daily promotes their health and protects against injury from being chilled, or from over-driving. For SHEEP, it is especially valuable as a protection against exposure to cold, and produces finer Mutton and Wool than any other feed. At present prices it is, for all feed purposes, the cheapest article in the market. For sale by all Grain and Feed Dealers, and at our Manufactory, KING STREET, between Second and Third. Liberal terms to the trade.

KITTLE & CO.,

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The NEW LESTER SAW is made of iron, with all the working parts of steel, and weighs 86 lbs. Boxed.

It consists of, first, a SCROLL SAW, with Tilting Table for inlaid work; arms 18 inches in the clear; clamps which will hold saws of any length or width, and face them in four different directions; cutting lumber from one-sixteenth to one inch in thickness; speed, 1,000 strokes per minute.

Second, a CIRCULAR SAW, two and one-half inches in diameter, which will cut lumber one-half inch and less; with an iron table 4x5 inches.

Third, a DRILLING ATTACHMENT, with six Stubs' Steel Drills of various sizes for wood or iron work.

Fourth, an EMORY WHEEL, with wide and narrow rim.

Fifth, a TURNING LATHE, with iron ways and rest, steel centers, and three best steel Turning Tools; length of way, 15 inches; distance between centers, 9 inches; swing, 3 inches; length of slide rest, 4 1/2 inches; number of revolutions per minute, 7,000.

Also, with each machine, six Saw Blades, a Wrench, Screw Driver, extra Belt, and two sheets of Designs, with a nice box for the small tools and a box for the whole Machine. It is taken apart when shipped and packed in a box, but the working parts are all left in place, and the frame is put together again by a single bolt.

Price For Everything Above Named, \$12.00.

When desired, we furnish with the Lathe a very nice Drill Chuck for working metal, and a Tail stock, with Screw center, \$2 extra. SEND FOR CIRCULAR.

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PROMPT AND SUCCESSFUL.—Messrs. Dewey & Co.—Gentlemen: Your Circular letter, 12th inst., informing me of successful termination of my application for patent received. Please accept thanks for the prompt and successful manner in which you have managed this business. Yours respectfully,
J. H. CAVANAUGH.
Walla Walla, Dec. 24th.

ONE of our most valuable exchanges is the PACIFIC RURAL PRESS, published by Dewey & Co., San Francisco, California. Every number contains a large amount of general news from the far west, besides much valuable information in the way of Orange news.—The Farmer's Friend, Mechanicsburg, Pa.

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With twenty-five years' experience in this Market, I think I can suit one and all, both as a buyer and seller. All I ask is a trial. I will also have a Ladies' Department, under the management of a lady of experience and taste, who will fill all orders for your wives and daughters. Orders for this Department should be endorsed, "For Lady Buyer." All parties ordering will be required to send funds with order or satisfactory reference. Respectfully,

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PACIFIC RURAL PRESS

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SAN FRANCISCO, SATURDAY, DECEMBER 14, 1878.

Number 24.

The Southdown.

Among the sheep, other than the standard Merinos, which are getting a footing on this coast, is the Southdown. They are shown at our leading fairs; and, as the production of sheep and lambs for the butchers becomes more and more an object to sheep growers, the Southdown is asserting among us the claims of excellence of flesh, large size and early maturity, which are the historic characteristics of the breed. In order to give some of our readers who are not acquainted with the Southdown, an opportunity to judge of its typical appearance, we have secured from Benson, Manle & Co., of Philadelphia, breeders and importers, an engraving of their ram, "Lord Walsingham." This ram won the medal at the Centennial, and was imported from the flock of the English Lord Walsingham. At the time the portrait was taken the ram was one year old. He has since died, but the portrait serves well to show the characteristic marks of finely bred sheep of his class.

The Southdown sheep are entitled to the distinction of being the oldest breed among all the improved blood which English breeders have developed. In them is the purest blood, that is the freest from admixture, because, useful as the Southdown has been in bringing good qualities to the other "downs" and other recognized breeds, it has itself borrowed nothing but has reached its present perfection by wise selection from among its own ranks. Some of the most signal triumphs of the breeder's science and art which agricultural literature records, have been in the successive improvements of Southdown sheep.

The following are the points of excellence in Southdown sheep, as described by Benson & Maule: "Brown faces and legs; haunch well let down; small head; neck short and well set on; fore quarters broad and deep; back and loins broad and straight; chest broad and ribs well arched; the belly as straight as back and well defended with wool; limbs short in proportion to size of body; bone fine but strong; face and forehead covered with soft hair; wool short, thick, curled and soft, and coming well forward over the face and terminating in a tuft on the forehead; ears thin, and eyes bright. They are altogether neat and symmetrical in form."

The Southdowns are in the front rank as mutton sheep. Their excellence lies not only in the quality of the flesh, but in the long breeding for flesh points, the waste parts have been reduced in size, and the desirable points developed. Early maturity and large size, are also characteristics of the Southdowns. Figures are given in which the average weights of pure bred lambs from 8 to 12 months old range from 80 to 100 pounds, and 175 to 200 pounds at the age of two years. They may be fattened easily at any age, and as in this State neither the heaviest nor the fattest sheep are desirable in the market, the advantage in using Southdowns must lie in bringing them to sale at an early age. In the production of mutton with common sheep, good points are to be gained by the use of Southdown rams, as such sires have been found very potent in transmitting their desirable points.

THERE were failures among New York cattle dealers, December 9th, aggregating \$90,000.

THAT PASSION FRUIT.—Some readers will remember the notice made of the passion fruit sent us by Mr. Grelck, of Los Angeles, and the aid which the *Florida Agriculturist* kindly offered us in fixing its specific name. We gave reasons why it should not be called *Passiflora quadrangularis*, and, accepting these, our Florida contemporary gives the following interesting information: "Now that the PRESS has described the fruit that it alluded to, perhaps we can give some information. There are several varieties of the edible passion fruit in the West Indies, all of which are good eating and the vines make very ornamental arbors. The fruit with hard rind is probably the *Passiflora maliformis*, or apple-fruited granadilla, that has a fruit about two inches in diameter rind very hard, can be carved in cups, etc. This species grows wild in Jamaica. The natives call it 'sweet cup,' or conch nut. It can be cut in two with a sharp knife, and the pulp eaten with

The Date.

EDITORS PRESS:—Will you favor us with a column on the cultivation and varieties of the date?—CHAS. T. MEREDITH, Nordhoff, Cal.

The interest in the date may be a general one, because there are many trees growing in different parts of the State, having been grown from the seed of the date of commerce. More than this, the date palm has fruited with us in one instance, at least, and that on the ranch of S. C. Wolfskill, in Solano county, as described in our issue of September 15th, 1877. The palm which produced this fruit was 12 years from the seed, 25 feet high and 2 feet in diameter of trunk. It blossomed abundantly in the spring, and ripened its fruit in September. Another point of local interest in the date lies in the proposition made to Congress last winter, to plant the great Colorado desert with the palms, as the conditions there prevailing agreed closely with the regions in which the date flourishes in Asia

fruiting: "The best trees are those produced from slipped plants. Those raised from seeds are much longer in arriving at maturity, and are generally poor. When the slip, taken from the foot of the stem of an adult tree, is first planted, it must be watered daily for six weeks, and every other day for the next six weeks; after which the trees are watered once a week in summer, and every month in winter.

"The nut does not commence to germinate under six months or a year after planting, and the growth is very slow in the first two years. In a favorable situation it will begin to fruit at six years, and lasts to 70 years or more.

"The tree commences to yield fruit about five or six years after planting; but it is not till after 20 or 25 years that it comes into full bearing, and then it will endure for about 150 years. A date tree in full bearing will produce eight or ten bunches, each containing 12 to 20 lbs. of fruit, which, at an average of 144 lbs. of dates per tree, is at the rate of 14,400 lbs. per hectare (2½ acres).

"The fine yellow dates of Rosetta and Burlos are preserved, and much sought after in Europe, and might become the object of an important commerce. In preserving them the epidermis is removed, and the two ends cut off; the stone is taken out by means of a small piece of wood, and the fruit thus preserved is boiled in water to soften and separate an astringent principle; they are then placed in a bucket to drain, after which they are put in a glazed pot. There is then added some hot concentrated sugar, in which they are left for six hours. At the end of that time the syrup, having lost its consistency by reason of its mixture with the water contained in the dates, is put on the fire and concentrated as before. Some more dates are then added, in which parched almonds have been placed, or some pistachios instead of the stones, in order to keep them from getting out of shape. It is then boiled again, until the syrup becomes more solid, and afterwards put into earthenware pots. When cool a little pulverized sugar, impregnated with essence of lemon, is added to flavor it."

SONOMA SEEDLING APPLE.—Mr. O. B. Shaw, of Sonoma, brought us the other day a box of fine specimens of the Sonoma seedling apple, which was first noticed in the *RURAL* of December 29th, 1877. This apple is noted for its winter-keeping qualities. The specimens brought were just in condition to store away, being not yet ripe enough for use. The proper name of the apple is the "Cook's Seedling," as it was originated by Mr. David Cook at Sonoma four years ago. Since then the apple has shown such unusual keeping qualities that at least 5,000 grafts have been taken from the original stock and put in by Messrs. Shinn & Co., of Niles, Mr. W. H. Pepper, and Mr. W. A. T. Stratton, of Petaluma. The apple is of good size, fine appearance, and is said to be good from this time until April. The tree is a good grower, shapely and very productive. We trust this new California variety will secure the fame to which it seems entitled.

THE Postmaster-General threatens to withdraw most of the postal cars unless Congress makes speedy and sufficient appropriations to pay for the transportation.



IMPORTED SOUTHDOWN RAM, "LORD WALSHINGHAM."

a spoon. Another species is *Passiflora laurifolia*, or laurel-leaved granadilla, the fruit is the size of a hen's egg, the flowers are red and violet and very fragrant. The French call this fruit *pomme d'or*, or apple of gold. Two species are indigenous to the United States, *P. latea* in the Southern States, and *P. incarnata*, or maypop, which grows further north."

AMERICAN HONEY ABROAD.—Our honey producers who have an eye upon a European market for honey, will be pleased to learn that the first considerable shipment of comb honey from this country to England has resulted successfully. The comb was in small frames with glass, and arrived in perfect order. The shipment was 80 tons. In this connection we may mention a report in the *American Cultivator*, which states that five tons of California lately arrived in Boston, so perfect that one would think it just in from some local apiary. The *Cultivator* said: "It seemed even firmer in the cell formation than the product at the East, while the flavor was individualized by a spicy taste by no means objectionable. This honey was retailed at twenty cents per pound in Boston."

BIO bank failure in South Wales.

and Africa. This project is still in abeyance, so far as we know.

The date palm (*Phoenix dactylifera*) is one of the most famous of the palm tribe, both because of the commercial prominence of its preserved fruit, and because in lands where it is indigenous it is the most precious gift of nature to the inhabitants, furnishing them food, clothing, and material for countless domestic manufactures. The date is specially at home upon the great Sahara desert of Africa. It grows well in the absence of rain, but it must have abundant moisture at the root, and in the desert it flourishes at those points where the underground water rises near the surface. It has been found that the tree will not fruit unless it has this abundant water at its feet.

It is not known how many varieties there are of the date, but, like other fruits, it counts its kinds in large numbers. One writer counts 90 varieties in one district of Africa; another gives accurate descriptions of 37 kinds. The Arabs enumerate 30 varieties; the fruit is of almost every shade of color except pure white and black. The size, too, varies within wide limits, some being three times as large as others.

Mr. Simmonds, in his "Tropical Agriculture," gives the following notes on propagation and

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents. — EDS.

The Condition of the Soil and Evaporation.

EDITORS PRESS:—Your editorial on this question in your issue of November 23d quotes an experiment from the *Rural New Yorker*, which claims to decide that a hard-packed soil best conserves its moisture during the dry season. You very justly refuse to accept his conclusions as applying to California. This question is an old one, and has been made the subject of very exact and extensive experiment in many of the agricultural colleges of Germany; but such loosely conducted experiments as those you referred to serve rather to mislead than to enlighten us. Had the *New Yorker* tried three sets of his pots, exposing one set to the wind only, protecting it at the same time from the sun's rays, exposing another to the direct rays of the sun, but sheltering it from the wind, and letting the third set take its chance of both influences, he would have learned something of more than merely local value. Various soils would have behaved very differently. Nearly all varieties would lose moisture quicker in the loose state by the action of wind alone; but many soils exposed only to the sun's rays would keep their moisture better with a loose surface.

The quantity of moisture in the soil of any locality is the product of two sets of conditions—of those tending to dry the soil and of those tending to moisten it. The drying of the soil is due to sun and wind, to the drainage of the soil, natural or artificial, to its condition of tilth, and the vegetation on its surface. And an all-important point about the winds is this, do the land or sea breezes predominate?

The moistening of the soil independently of rain is due to many conditions. The nature of the soil is all-important, then the state of its surface, of its tilth, its temperature, its slope and nearness to hills or any elevation of the surface, not to mention the inclination of the underlying strata. The winds, of course, have their influence, but a more important one is the range of temperature between day and night. So, near the sea, it is quite unusual to experience such a difference of temperature between day and night as we have in California. Our frequent dews and fogs are merely visible indications of this difference and of the wealth of moisture in our atmosphere. But the *invisible* vapor, equal to about five inches of rainfall, is our mainstay, and the power of a soil to condense this is almost entirely a matter of tillage and management, and so far in our own hands. The weeds, of which we burn so many thousands of tons annually, would, if properly managed, make many a dry and barren waste a summer garden. Made into compost and plowed into the lighter and drier soils, decaying vegetable matter forms a soil unsurpassed in absorptive and retentive powers. Not only thirsty soils, but alkali land could be thus wonderfully improved. As we understand the Divine laws better which govern the fertility of the soil, we find fewer and fewer instances of irremediable barrenness.

Before coming to California, I spent over a year in Melbourne, in Australia. The Australian continent is as large as the United States, but the part I write of was both in latitude and climate very similar to the northern half of California. The rainfall averages about 26 inches, (in Sonoma county we have about 27 inches), but rain falls there, however, in summer to the extent of about one and a quarter of an inch during each month. Should none fall for three weeks, the farmer becomes anxious, and indeed the very trees begin to look thirsty and all growth is at a standstill. You may imagine then with what interest I viewed the Californian summer's wonders. Trees with their leaves still green and healthy after the usual six months of summer drouth, and large stalks of green Indian corn from six to nine feet high, that had never seen a drop of rain from their birth. Whence the difference between the two countries?

The main points of difference are that in southern Australia (colony of Victoria), 30% of the summer's winds were off the land, and hence drying winds; here as far as I have seen 5% is an outside estimate. In Australia these winds come from the tropics, and hence far exceed ours in their heat and parching quality. Their sea winds on the other hand, unlike ours, are all polar in their origin, and coming from a colder sea contain less moisture than ours, and less readily part with it to the warmer land. Indeed the sea-breezes there are not the rain-bearing winds, and in their progress they rather become drying winds, as they can only increase in temperature and hence in water-absorbing capacity. Again, the nights are much warmer than with us, and that means less dew, less fog, a warmer soil, and consequently rather a loss than a gain of soil moisture during the night.

In California the drying of the soil is due far more to the heat of the sun, than to the action of the winds. To-day some clayey soil on the north side of our barn, is yet quite plastic and moist on the surface, though it is 17 days since our last rain. The barn shelters it from the

sun, and the wind's drying qualities are more than balanced by the nightly dews.

Dew is always deposited in proportion to the coldness of a surface, and not only will a cultivated surface grow colder at night than one unbroken, but it will present a surface for the deposition of the dew ten-fold and even a hundred-fold greater than that of the hardened surface. Besides the moisture obtainable from dew, porous earth has a condensing power of its own on the invisible moisture of the atmosphere. A loosened surface also protects the under-soil from the sun's heat, and so prevents the loss of its moisture. The subject is a large one, but the above hints will enable anyone to follow it out for themselves.

C. D. HUNTER.

Sonoma Co., near Santa Rosa, Nov. 30th.

Fresno County—No. 2.

EDITORS PRESS:—Continuing my writing, I remark that the climate of this county has been unfavorably reported on. It is in consequence associated in the minds of many with the disagreeable feeling attendant on overwhelming heat. On this point, also, I wish to give my testimony. Some years of my life have been spent in tropical climates, where the thermometer never registers the high temperature which prevails here during summer; yet such climates, to say the least, are unfriendly to the Caucasian races. The European dare not labor in the field, and under the most favorable circumstances which come to his aid, in the shape of commodious dwellings and appliances to keep them cool, his health breaks down in a short time; with some a few months, with others as many years. It is not so here. With the mercury up to 110° in the shade, I have seen men engaged in the laborious occupation of heading and threshing grain without injury to themselves. Such a statement sounds to those outside of the State incredible. It did so to me, but it is not so now. The peculiar dryness of the atmosphere appears to ameliorate the heat, by causing rapid evaporation over the skin, and though this process of refrigeration is disagreeable at times it is not unhealthy. Sunstrokes are unknown amongst us. The shelter of the most flimsy cottage, constructed out of one-inch boards, is all the protection from the sun needed and afforded to the farmer's family, and here again, apparently, without injury. I believe that it is the healthfulness peculiar to California which makes up, in a great measure, for the deficiency of food and living altogether, which I have noticed in the home of the poor settler. But these deprivations are now passing away—a good living can always be gained. Of course we have grumblers. Have you been anywhere without meeting them? Have you yet found the country where the weather is not a frequent cause of complaint? Taking it on the whole, I consider our climate as good as that of the most favored countries, and this opinion is founded on the experience of a sojourner in distant and divers lands. If the opinion goes for nothing, I have still the facts noticed above to fall back on.

The Thirst for Change.

Grumblers have frequently led me to moralize. I am convinced that, in nine cases out of ten, they attribute their annoyances to the wrong cause. They make themselves believe that their lot is a hard one, and, to complete the satisfaction they seem to derive in the consciousness of their own wretchedness, they find a cause for it in circumstances which really work for their good. Much grumbling here, I think, is attributable to a strong, though hidden desire which seems to be rampant among the Americans as a race, more especially. I allude to the desire for change; the chimera of a better country somewhere ahead of them. How many illustrations of this have come under my own observation. Here we have not a few who have toiled and struggled to acquire for themselves that which should be priceless, viz., a home. But they are still dissatisfied. Rumors of a better country just ahead panders to a morbid desire for change, and they ruthlessly sacrifice their "Lares and Tenates" on the shrine of instability of purpose, and go. This strikes me forcibly, as a stranger in America, coming from the same country as the forefathers of my American consins. I see in them a peculiarity seldom met with in the old country—change—an insinuating specter is lurking at many a fireside and in many a pleasant home. Often, during my visits to the surrounding families, I notice the chilling influence of this specter's presence. In the midst of conversation, he whispers in the ear of his unfortunate victim, and I notice in the restless look, the dissatisfied countenance the malaria of his poisonous breath. The contagion extends from parents to children, and in the place of happiness and contentment we have dissatisfaction. Hence our grumblers. Love of home among such is something they only imagine they possess. I have seen the aged hurrying along, as fast as railroads could carry them, away to some country where they hope at last to find a home. Vain delusion, to commence life again at its close! Hurrying away very often from the scenes of their youthful labors, from those domestic joys and those happy associations which cling to the home of our youth. And thus, alas, moving down from better to worse. For such our country has no charms, and from such may we be delivered!

EDWARD KAUNTZE.

Kingsburg, Fresno Co., Nov. 22d, 1878.

Manufacture and Use of Commercial Fertilizers.

EDITORS PRESS:—A short time ago your correspondent took a stroll out to the bone-charcoal and agricultural fertilizer manufactory of his old friends, Ohlandt & Buck, at the beginning of the second Long bridge in South San Francisco. These gentlemen commenced the business of making bone-charcoal and neat-foot oil in this city in 1865. By persevering industry and strict honesty in all their transactions, they have built up a business that overshadows all others of its kind on this coast, and, in extensiveness, is equal by few in the United States. At their factory they give constant employment to more than 20 men.

Up to about 1870, Messrs. Ohlandt & Buck confined their operations exclusively to the manufacture of bone-charcoal and neat-foot oil. Since the latter date they have given a part of their attention to the manufacture of bone fertilizers.

Their long and extensive experience in the preparation of bones has enabled them to perfect a process—the invention of the proprietors themselves—by which they can turn out a better and cheaper article of bone-coal than has heretofore appeared in the market.

The energy and perseverance of Ohlandt & Buck have enabled them successfully to compete, during all these years, with the products of Eastern manufacturers, till they have succeeded in driving them almost completely from our markets. Their bone charcoal is used exclusively in all the sugar refineries on the Pacific coast, and they have now commenced shipping it to Mexico, where several sugar refineries have been lately started.

For the preparation of the bones for charcoal they have four large kilns, in which the bones are charred or carbonized, and every trace of animal matter is destroyed. The bones are next ground, when they go through a careful process of screening, and the article is then fit for use for general filtering purposes. The refuse or dust left after this operation is put through a chemical process, and thus is made the superphosphate.

The ground bone, bone-meal, or bone-flour, as it is variously called, according to the degree of fineness to which it is ground, we will describe by quoting from Prof. Hilgard. In his report to the President of the University for 1877, describing a visit to this same manufactory, he says: "This establishment was visited for the purpose of ascertaining what progress had been made in the manufacture of phosphate manures on the Pacific coast; and specimens of the article were courteously furnished by the proprietors. * * * They manufacture both bone-meal and superphosphate, but for want of a market, chiefly the former. This is prepared in the most approved manner, by steaming the bones, which process not only renders the bones so friable as to be much more easily pulverizable, but is also well-known to increase materially the efficacy of the meal as a manure. The Professor then describes the superphosphate made by this firm, and draws a comparison between it and the Eastern article found in our market, by no means flattering to the latter.

For the manufacture of this bone-meal, the firm has lately introduced improved and expensive machinery. It is their policy to spare no expense in availing themselves of all the latest improvements in machinery that bear on their business. In some instances their best improvements have been the products of their own observation and experience.

But the chief interest which this extensive establishment has for us, is the manufacture of agricultural fertilizers. For this business they have advantages which no other firm on the Pacific coast can have. Their large bone-charcoal business with the sugar refineries, gives them very superior advantages. Schooners and lighters can take their products right from their own wharf, and carry them to any part of the bay, or to any ship in the harbor.

Strange to say, with all these advantages so near at home, the California farmers have not yet been persuaded to make any noticeable use of these wonderful fertilizers. The firm stated to your correspondent, as they did to Prof. Hilgard, about a year ago, that the home consumption of their articles is very small, although for the past two years it has been on the increase, especially for use in vineyards and on lawns. They find markets for most of it in Germany, the Eastern States, Australia and New Zealand. The New Zealand market for these products was first opened up by this firm, and they can now dispose of all they send there; and as they showed us by quotations from New Zealand papers, their products bring a higher price than any other brands in that market. When we consider, too, the high freight from here to New Zealand, we cannot help feeling surprised, when we compare the appreciation of these fertilizers shown by the farmers away off in New Zealand with the wonderful lack of it shown by our California farmers. If there were no other fact than this, it would be a proof that there is a most urgent need of diffusing agricultural information of a very fundamental kind among our farmers. Of course the most obvious means of doing this is through our College of Agriculture at the University; but it does seem that the Grangers and other agricultural societies might, by some concerted movement, make themselves the means of diffusing such information through the agricultural press, pamphlets and lectures, by

making and giving the results of experiments.

But still the extraordinary qualities of bone fertilizers are so notorious to all who possess the most elementary ideas on scientific agriculture, that the indifference to their use, by our California farmers, seems almost ludicrous. Our farmers take crop after crop, year after year, from their farms, never giving themselves a thought about the exhaustion of the soil, or that they are robbing themselves and their children of their future substance, till their land at last will refuse to pay the expense of cultivation. They lose sight of the simple fact that for the development of their crops not only must the soil be prepared for the seed, but the soil itself must contain certain mineral or earthy matter which enters into the structure of their fruits and cereals. When the soil contains sufficient quantities of this the farmer will be rewarded for his labor—otherwise, not. It is this substance that comes out of the soil that constitutes his profit. Every crop removed from the soil removes a certain percentage of its fertility, and if the process were continued without renewing the fertility, nothing is clearer than that the soil would soon be exhausted. When the farmer sells a bushel of grain, or a ton of hay, he sells so much of the mineral wealth of his land. These mineral constituents are generally distributed on the surface in limited quantities. The carbonic acid, nitrogen and ammonia compounds are constantly being returned to the soil through the atmosphere, by nature herself, according to the immutable laws of circulation. But the phosphates and potash of the soil are rapidly exhausted, and these must be returned to the soil by the agriculturist himself.

The phosphoric acid from our farms is carried away in grain bags, fruit boxes and animal frames on our railroads to our large cities, where it is lost; or is taken in ships to England. Says Prof. Waring: "Phosphoric acid forms about one-half of the ashes of wheat, rye, corn, buckwheat and oats; nearly the same proportion of those of barley, peas, beans and linseed; an important part of the ashes of potatoes and turnips; the cultivation of our whole country has been such as to take away phosphoric acid from the soil without returning it. Every hundred bushels of wheat sold contains about 60 pounds of phosphoric acid. For every cow kept on a pasture in the summer, there is carried off in veal, butter and cheese, not less than 50 pounds of phosphate of lime (bone earth) on an average. This removal of one of the most valuable constituents of the soil has been the cause of more exhaustion of farms and more emigration in search of fertile districts than any other acts of injudicious farmers."

No inference can be plainer from these facts than that the present methods of farming in use in California will prove ruinous in the end. Since this loss to the land which we have spoken of must be returned to the soil by the farmer himself, it follows that the next thing to look at is the best means of effecting this end. All know that bones are the most available source of phosphoric acid—ordinary bone-meal containing from 24% to 25% of phosphoric acid, besides other desirable fertilizing qualities. Prof. J. T. W. Johnson (in *Agricultural Chemistry*) says: "Few substances have of late years done so much to increase the agricultural produce of various parts of England, as the use of ground bones for manuring the land."

England imports thousands of tons of fertilizers every year, in addition to which every particle of material valuable as manure—all the excrements of the large cities, even—is saved. The fertility of our soils goes not only to feed English mouths, but to increase her harvests, too.

In the same part of the "report" above alluded to, Prof. Hilgard says: "It can hardly be questioned that the hauling of common stable manures, from the city stables to the truck gardens outside of the city, very frequently renders that manure more expensive than would be an amount of high-grade superphosphate, producing a corresponding commercial result. It cannot be long before this will be understood, and the shipping of our phosphates to Australia replaced by sales in the home market. I cannot help thinking that if a first-class fertilizer of this kind, sold by assay of actual value as are other products, were to be had in the San Francisco market it would soon come into use, and that a most profitable industry would thus speedily be created. Wherever crops producing a high value per acre (such as the fruits of California) are prominent in culture, the introduction of the use of concentrated commercial fertilizers, to increase and improve the products, cannot be long delayed."

Undoubtedly, as suggested by Prof. Hilgard, fruit culture will be the first field for the introduction of these fertilizers, and they have already begun to be used for this purpose; but they can be used with almost as much profit in the cultivation of cereals. It is not uncommon for the number of bushels to the acre to be doubled by the proper use of bone fertilizers.

The effect of these bone fertilizers on the soil is not exhausted with the present crop, but its effects will run through several years.

Messrs. Ohlandt & Buck are now preparing to give more attention than formerly to the sale of their fertilizers in the home market, and all will have a chance to give them a fair trial. They have also commenced the importation of guano; but as yet the greater part of this is also intended for export. From the personal knowledge your correspondent has of these gentlemen, we are sure that all who deal with them will be profited and satisfied.

M.
San Francisco.

HORTICULTURE.

Salmon Berries and Others.

EDITORS PRESS:—Some of your correspondents seem to refer to one kind of "salmon berry" and some to another. That so-called near the mouth of the Columbia is a raspberry (*Rubus spectabilis*, Pursh), found in damp, shady places, with bright purple flowers expanding in February to April, and large fruit varying from yellow to blood-red, very juicy and well-flavored in good situations. The shrub like our garden kinds is thorny and the shoots several feet high not bearing the first year.

From long observation in its native regions I think it would be cultivable in cool, shady, damp situations only in California south of the Golden Gate. It may, however, become acclimated if raised from seed.

The other berry confounded with it, is a brighter red and drier kind, growing on a thornless bush, with large leaves shaped like a maple-leaf, and with white flowers. It is found in San Mateo and San Francisco counties in rocky places, though rare and with little fruit. A very similar kind with purple flowers is called "thimble berry" in the Eastern States. To the north the Indians gather these as well as the true salmon berry, and often mix them so that the flavor of the lot purchased of them will vary with the proportions of each.

This kind is usually very acid though well flavored, and would perhaps improve in cultivation, besides being a very showy shrub. From its first discovery at Nootka sound it is called *Rubus Nutkanus*.

There are also three other species of *Rubus* in Oregon and northern California.

1. The *R. leucodermis* (meaning white-skinned), having the young shoots and berries covered with a white bloom; otherwise like the Eastern "Blackcap."

2. *R. trivialis*, a trailing blackberry.

3. *R. macropterus*, a bush blackberry, which is also the most common kind found wild in California, chiefly along streams and about springy grounds. If it will grow in dry places it is certainly more desirable in gardens than the Eastern blackberry cultivated, being a month earlier in ripening and much better flavored. By cultivation the fruit would no doubt become equal in size to the largest varieties of the common Eastern bush blackberry.

Huckleberries or Whortleberries.

The red berry described by Mr. Jessup in your last number is classed by botanists with the above, being the *Vaccinium parvifolium*, and is much like a small cranberry in flavor, being also excellent as a substitute for that fruit or for currants. It grows only in the shade of fir forests and like all of its tribe is hard to cultivate, having also no peculiar advantages over the cranberry.

Another kind of huckleberry is found on the Cascade mountains, at a high altitude, flavored much like a grape and the size of buckshot. It would be worth cultivation, but probably would not grow out of its native regions. Several other kinds also grow north of here.

Haywood, Cal.

J. G. C.

The Salmon Berry.

EDITORS PRESS:—I am constrained to put myself on the record in regard to this berry. In 1858, I saw it growing wild on Vancouver's island, near Victoria, but too late in the season to see it in fruit. The plants towered up in the form of a stiff cane 10 or 12 feet in height. The descriptions of Mr. Mavity and others are as good as I can give of the color and general character of the plant. Capt. H. Dunham, then of Alameda, went the following winter, 1858-59, with a sloop to the Humboldt country on purpose for this plant and the roots of the wild red cherry and crab apple for grafting purposes. Among those who tried the salmon berry in the sandy land of Alameda, was Judge Crane and, perhaps, Dr. William Gibbons. At any rate the experiment proved a failure there as well as on my heavier lands in Fruit Vale. The plants were retained on my place five or six years, during which time I raised an abundance of suckers, growing four or five feet high, and but little fruit of indifferent quality, when other berries are to be had. They were recommended to me by Indians, who like them very much, as well as by lumbermen, who have no other fruits. They are in no respect fit for shipping as a market berry, being tender to handle—a mixture of juice and seeds, but the larger portion seeds. They are best when used while fresh, as I am informed by experts, in a bowl of milk. The berry is much inferior to the red raspberry; and, although the cane and leaf are unlike it, the fruit is nearest allied to the red raspberry of any variety of fruit known to me, unless it be the yellow raspberry. I may add that it is similar to a species of wild fruit known in New York State in my boyhood days as the "thimble berry," and I have recognized a similar variety of plant growing wild in the Santa Cruz mountains, with the exception that the latter grew in dry, rocky places, while those of the upper coast, so far as I saw them, and also the "thimble berry," so far as I can recollect, grew near springy spots, on sloping ground, affording an abundance of moisture with good drainage. Hence the great perfection it attains on the upper coast, and probably greater fruitfulness.

The bright red berry, referred to by your correspondent, Mr. Jessup, I also saw near Victoria, and think it is known as the "salal berry." There is such a berry there, and my impression is that this is the berry. It is a most beautiful fruit to look at, and if my memory serves me correctly, is quite palatable. I was unfortunate in not fruiting it, and some way lost my plants also. I. A. WILCOX.
Santa Clara, Nov. 30th, 1878.

The Citrus Family at the Los Angeles Fair.—No. 2.

EDITORS PRESS:—I promised to describe some of the exhibits of the citrus family at the late Los Angeles Horticultural fair. Thomas A. Gary, President of the Co-operative Nursery and Fruit Company, had a mound of earth prepared on an elliptical base on the floor of the pavilion, to which he transplanted citrus trees enough to form a miniature grove. Some of the trees were bearing oranges.

The Bouquet Orange.

The bouquet variety was represented in a large tree presenting all the phases of bloom—bud, fully expanded blossom, green oranges of all sizes, and the fully ripe orange. The bouquet, it should be noted, is more ornamental than useful. Other varieties go about blooming in a certain season, finish that part of the process, and then go about the next, and then the next, and so on to the final one of turning the green globes to globes of golden hues, each department in this process being promptly finished up before the next is fairly begun. These varieties are the valuable ones as fruit producers. The bouquet variety presents orange blossoms at all seasons, which fact expands to greater importance by reason of the intrinsic merits of the orange blossoms merely as a blossom. Apropos in this connection is the statement made by Du Tour: "The scent of the orange flowers," says this brilliant French author, "is regarded as a standard of perfection in its kind. It has not like that of many flowers a deceitful sweetness, which pleases only to injure. It is not faint like the scent of the jasmine or mignonette; it does not affect the head like narcissus or tuberose; it does not weaken the nerves, but rather strengthens them. It is a salutary odor, which refreshes the senses and enlivens the brain. In fine, it has no rival and is as salutary as delicious." *Essentia neroli*, an oil, is an extract of orange blossoms. They are available in the choicest perfumes. Much of all said of orange blossoms applies to those of the lime and other species of the citrus genus.

Other Varieties of Citrus.

Mr. Gary also exhibited citron, grape fruit and shaddock trees. No fruit of either of these varieties was exhibited. While California soil does the marvelous as to the size of products, it seems that no citrus fruit has been raised here as large as the shaddock of the West Indies, whither it was taken by Capt. Shaddock. There it sometimes attains the size of the human head, barring, perhaps, the Websterian standard. Hence: "*Malus aurantia fructu caput humanum*."

The shaddock, the grape fruit and the so-called forbiddeu fruit are all comprehended within one and the same branch of the citrus family—the *Citrus decumana* of the botanists. Mr. Gary also exhibited the Mikaw orange tree, a recent importation direct from the palace grounds of the Mikado of Japan. Prominent in this superb exhibit were Gary's Mediterranean Sweet orange and "Gary's Eureka" lemon, from a stock raised by C. R. Workman of Los Angeles. The Eureka lemon is thornless, seedless, and has a sweet rind. The sweet-rind lemon has a rind of neutral taste, neither sweet nor bitter.

A dwarf tree 32 inches high and one inch in diameter bent under the weight of 16 oranges. In Mr. Gary's collection were bearing chestnut trees. One tree one inch in diameter was top-heavy with six nut-freighted burrs.

Another Exhibit.

The citrus grove of Fisher, Richardson & Co., of Los Angeles, was a striking group of fresh and richly green orange, lemon and lime trees, some in bearing. A thornless sweet-rind lemon tree, while on exhibition, ripened its first lemon, which being cut, gave a strong sparkling acid, without a trace of bitterness in the peel. It is asserted that the early winter crop of the seedless lemon is literally seedless, while the spring and summer crops have seeds, but fewer than other varieties. In this indoor grove was the Sicily sweet-rind lemon.

It is now quite common to graft lemons on orange stock. It is said that better lemon trees are thus secured. Fisher, Richardson & Co., and other nurserymen, lay great store by the orange root for both the lemon and the orange tree. A St. Michael orange tree three-quarters of an inch thick, three feet high, was in bloom. After the close of the fair, Fisher, Richardson & Co. more than decimated their orange grove in the pavilion by filling an order from Stockton.

A. F. Mills, of Pasadena, exhibited a Eureka lemon one inch in diameter and five feet high; a five months' bud on an orange stock. The number of points scored by Pasadena at the fair are up in the dozens.

Notes on Orange Growth.

D. C. Hayward, of Orangethrope, exhibited a Gary's Mediterranean sweet orange tree one and a quarter inches in diameter, 10 feet high, 18

months from the seed, and another Mediterranean sweet from the same nursery, only 20 inches high and less than an inch thick and evidently oldish, for it was bearing two oranges. No wonder experts are puzzled to know just what this Mediterranean sweet is. A dwarf if you like; a sizable tree if you prefer. Going off for analogies, there is the common bee fed up to a queen, and Hawaiian kings extra nurtured up to corporeal majesty; while on different rations the plebian Kanaka is almost dwarfy. And now comes a citrus aristocrat, tall and bloated with faring sumptuously every day, springing the inquiry: Now upon what soil feeds this our Orangethrope Mediterranean sweet, that he has grown so great, while the neighbor and brother stands only 20 inches high? The two oranges under which the 20-inch staggered, and the unnatural precocity that assumed that burden, and a feeble root withal, must be taken in explanation.

Other orange trees were exhibited by Mr. Hayward, and some of them bore extra large succulent foliage, and impressed the observer with the extraordinary beauty of the rich green bark of the stems from root to branch.

Mrs. Shaw, of Los Angeles, and P. M. Green, of Pasadena, exhibited citrus trees, but studies of the exhibit made by the writer were abruptly terminated before having an opportunity to specially visit these two displays.

A. J. Cooper, of Los Angeles, held pomological levees in his orange grove in the pavilion. Mr. Cooper's Mediterranean sweet six feet high, two and a half inches thick and six years old from the bud was in bearing. His seedling lime trees were two inches thick, ten feet high and three and a half years old from the seed. His lemon trees were three and a half inches thick, 15 feet high, three-year-old buds on five-year-old stocks. Mr. Cooper's display of apples and peaches was creditable. Among his apples were several varieties that keep far into winter and a few that keep into spring.

Jose Rubio, of Los Angeles, made a fine display of citrus trees, grapes, raisins, almonds, English walnuts, etc. His citrus trees demonstrated excellent management. His table grapes and 12 varieties of white grapes were greatly admired.

The writer, without examining the list of awards, is of the impression that all of the exhibitors mentioned were awarded premiums.

JOHN H. SHIELDS.

Florence, Los Angeles, Cal.

THE STABLE.

Breeding Horses in California.—No. 10.

[Written for the PRESS by JOSEPH CAIRN SIMPSON.]

When the foal has sucked the first difficulty is overcome, the second is that the first discharge from the bowels takes place. This is a dark colored excrement which has gathered before birth, and in a great majority of cases, soon after the foal has had a sufficient supply of milk, there will be no trouble. But if in a few hours time there is evidently a desire to void the matter without success, then a clyster of castile soap suds should be injected into the rectum, using a small syringe, and being as careful as possible. The suds should be lukewarm, with soap enough incorporated to make the liquid emolient. Very little is required to effect the purpose, and as soon as the desired end is gained, stop. If that result does not follow at first, repeat the operation after a few hours rather than to give physic of even the mildest description. If after the first passage there is still constipation, repeat the clysters, and if these do not remove the trouble, give the mare mashes made of scalded oats and bran, in equal proportions, with half a pint of flaxseed and a handful of salt. This is better to be fed warm, and a tablespoonful of flour of sulphur may be put in it should there be costiveness in the mare as well. While the first danger is generally from constipation, when the colt is a few days old, there is more likelihood of trouble from "scouring." In that case give the mother dry feed, and for her drink a pint of wheat flour stirred into a bucket of water. If that does not stop the scouring, scorch the flour and restrict her food to hay and oats with a limited supply of drink. Only as a last resort give the foal medicine. I have known an egg broken into a cup of black coffee and given to the foal, stop the discharge when everything else had failed, and the animal so weak that it could scarcely stand.

One thing I am desirous to impress upon the minds of the breeders of horses, and that is never to *drug* when it can possibly be avoided, and in all cases use simple medicines in preference to those which have virulent properties. Fortunately, horses are not prone to disease when properly treated, and with them careful nursing is more potent to remedy than the use of medicines. So far the treatment of the foal is the same as those of any breed, but with the embryotic race horse or the trotting colt, which is expected to perform when young, the after management must be different than with the animals which are destined for uses which do not require so severe a strain on the muscular and nervous systems. The thoroughbred youngster is now under consideration, and the old Yorkshire motto that "half the horse goes down his throat" is not expressive enough so far as he is concerned. While it is essential

that a full flow of milk in the dam be encouraged, it is still more necessary that the lacteal fluid be as rich as possible. It must be such as to give the rapidly-growing animal the sustenance which will ensure the deposit of bone and muscle of the finest quality. Herbage, no matter how good, will not accomplish that object, at least so long as while the herbage is green. Every one at all conversant with horses is aware that those which are fed with grain have more spirit than the grass-fed ones, and that they are far more apt to indulge in an expression of an exuberance of feeling, a high spirit which the others do not show. They will keep briskly at exercise long after the others flag, and have a vim, an energy, and a resolution in performing their allotted tasks, in strong contrast to those which may be naturally physically superior.

The mare being well fed with good, sound grain, and, though oats are, doubtless, preferable, barley and wheat will do, her offspring shows the same advantage as the horse which is worked. He grows more symmetrical, and to ensure a hardier growth, he plays the greater part of the time when not sleeping or nursing. He gambols around his mother when only a few days old, and, in the old times, when colored servants were the only ones about the breeding farms of Kentucky and the other States where race horses were reared, they anxiously watched the play of the foals to get an indication of the distance they would be able to run when old enough to take part in races. "A race horse sure, sah, and a four-miler, too," one of them remarked to the writer, "for see, though he has not straightened on his legs yet, he goes round his mother four times without stopping, and he goes as wide as he can for the fences." Should the sun be shining, whenever the foal is strong enough so that it can toddle after the mare, both should be turned into the small lot or paddock. The sunbeams have a remarkable effect in giving strength and vigor to the foal, and after resting for a short time in the bright rays, it will take its sustenance with increased appetite. A few hours will effect such a change as could scarcely be believed possible, and after a week of bright weather, there is little danger of further ailments. The thoroughbred foal should never be wet, and when there is a shower even, the dam and it should be returned to the box. The regular feeding of the mare must be persisted in, and ground oats placed in a box for the foal to eat just so soon as it gives an inclination to nibble at them. The mare should be tied up while eating, and a box put in a place where the foal can reach it with ease when it gets old enough to relish the meal by itself. When two months old it should be accustomed to the halter, but before that time, in fact from its birth, it should be handled and accustomed to the caresses of the man in charge. But this essential part of the education deserves a more careful description than I have the time to give in this chapter.

POULTRY YARD.

Notes from Exchanges.

Examine the Combs.

It is the easiest thing in the world, when you know how 'tis done, to tell when your fowls are in ill health, even in the incipient stages of any disease or ailment, if you but examine your flock carefully. The comb of each fowl is a true index to the working of its system. If they be in ill health, the comb will lose color and become far less firm in texture; as the malady increases, the color decreases, till a very sick bird will show a comb almost devoid of scarlet, being of a livid dull crimson, or else pale or ashy in appearance. If the cholera, or any other disease, should come into the flock, carefully examine the combs of each bird, morning and night, and all those which are wanting in that bright, rich color which denotes perfect health, remove at once from the flock to a place remote, where they should at once be put under medical treatment. The comb of a fowl is an honest index of the true inwardness, and should be daily consulted by the fancier who values the health and well being of his flock. Look at the comb of a laying hen or pullet! She is in the height of health and strength, and carries her unfailing sign of healthfulness on her head, in the shape of a blood-red, bright, and full comb. A vigorous cock or cockerel will carry the same sign, though not, perhaps, in so eminent a degree as his harem.—*Poultry Yard*.

Table Fowls.

There is considerable difference in the merits of the different breeds of fowls for the table, although taste has much to do in determining which are the best; and, while breed has something to do with it, the age has a great claim, for some are better at certain ages than at others. The young immature and slow growing Brahma, for instance, is not desirable until it has nearly gained its growth, and even then it is far better when a year old, when fattened up quickly. And, in fact, a year old bird of any breed we prefer to chicken, no matter how it is cooked, though many have a weakness for broilers in the shape of young chicks. Young Leghorns, which feather up more quickly than do the Asiatics, and mature more rapidly, make the best broilers, and many a nice one have we helped to dissect after it has come from the hands of a skillful cook.—*American Poultry Journal*.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

National Grange.—Twelfth Annual Session.

We collate from the Richmond (Virginia) papers the current notes concerning the late meeting of the National Grange. The National Grange met November 21st in the hall of the House of Delegates, at 10:30 A. M.; the following officers being present: Samuel E. Adams, Minnesota, M.; J. J. Woodman, Michigan, O.; Mortimer Whitehead, New Jersey, L.; William Sims, Kansas, S.; S. B. Alexander, North Carolina, A. S.; Henry Eshbaugh, Missouri, C.; F. M. McDowell, New York, T.; Isaac Williams, Ohio, G. K.; Mrs. S. E. Adams, Ceres; Mrs. J. J. Woodman, Michigan, Pomona; Mrs. J. T. Moore, Maryland, Flora; Miss Palmer, L. A. S. Twenty-two States were represented at the opening of the Grange.

The Grange was opened in due form; an address of welcome being delivered by Dr. J. M. Blanton, Master of the State Grange of Virginia, which was responded to by H. S. Ellis, of Ohio, the Senior Master of the National Grange.

The address of Master Adams, of the National Grange, was then delivered, in which he gave an encouraging review of the operations and growth of the order during the last year. The reports of the Executive Committee, the Lecturer and the Treasurer were received and laid on the table.

The Treasurer's report shows that (exclusive of permanent investment) there was a balance to the credit of the Grange on October 1st, 1877, of \$3,468.68, which has since been increased by receipts, principally by interest on bonds, aggregating \$4,599.15. In addition the receipts of State Grange dues for the year amounted to \$16,739.11. The total amount to the credit of the treasury is \$24,806.94. The expenditures during the year amounted to \$20,188.61—leaving a balance, October 1st, 1878, of \$4,618.33.

The evening meeting of the first day was taken up chiefly with welcome addresses from the Governor of Virginia and others, to which appropriate addresses were delivered in reply. One of the speakers eloquently urged the National Grange to aid in the promotion of the James River and Kanawha canal project, as of benefit not only to Ohio and Virginia, but to the agricultural producing regions of the whole Union.

At a public session of the Grange, among the other addresses, Master Dudley T. Chase, of New Hampshire, said: A belief in human progress, in man's capacity for self-government, was indigenous to the soil of this old State. It was here that primogeniture and entails and an established religion gave way to the bill of rights with its freedom of conscience for all. It was here that Nathaniel Bacon, a farmer, 200 years ago proclaimed the doctrine of local self-government and raised the first standard of rebellion to foreign tyranny on American soil. He was unsuccessful, but the prophecy of Sarah Drummond, the Virginia matron, who, in a public meeting in Williamsburg, declared, "the child that is unborn will have cause to rejoice at this rising of the country," was verified in the grand results of a century later. The emancipation of African slavery, that institution imposed upon Virginia, and one of the grievances for which a separation from the mother country was demanded, was an unsolved problem with the distinguished agriculturists of her heroic age—a problem now solved by that overruling Providence which moves in a mysterious way. We do not believe that the human mind, surrounded by the conventionalities, the prejudices and passions incident to city life, could have ever conceived those grand ideas of republican government which the men of Virginia, reared in the free and untrammelled walks of country life, gave to America and mankind. Our order is not political; it allows freedom of thought and speech in the affairs of government, and it is well. Our republic must always have two great parties; others may arise with patriotic aims, but they will be temporary. The public good requires a Federal and a States rights party; the one endeavoring to strengthen the General Government, the other jealously guarding the reserved rights of the State sovereignties. These act, the one as a centripetal the other as a centrifugal force, to keep our Governments in their proper orbits. Washington belonged to the former and Jefferson to the latter, and we can be patriots emulating their example while belonging to either. Let us then, whatever be our political faith, strive to keep inviolate the Federal Constitution and its amendments, and preserve the purity of our popular elections as the palladium of our liberties. With the agriculturists of America, determined in whatever party they may be to use their potent influence for the right, no harm can ever come to our country. Communism on the one hand and ambitious wealth on the other may threaten destruction and corruption, but after the storm will come

the sunshine to ripen the golden grain of peace and prosperity in our land.

He made in conclusion a warm appeal to members to remember their sacred obligations and to banish all sectional animosities.

The second day was devoted to the formation of the standing committees, some delay being caused by Master Adams's ill-health. The following were finally decided upon:

Finance—Brothers James, Indiana; Smith, Georgia; Sims, Kansas; Sisters Ellis, Ohio; Shipley, Oregon.

Constitution and By-Laws—Brothers Chase, New Hampshire; Woodman, Michigan; Thing, Maine; Forsythe, Illinois; Baylor, West Virginia.

Co-operation—Brothers Blanton, Virginia; Sherwin, Wisconsin; Shipley, Oregon; Eshbaugh, Missouri; Forsythe, Illinois.

Transportation—Brothers Piolet, Pennsylvania; Wayne, New York; Lipscomb, South Carolina; Lang, Texas; Steele, California.

Good of the Order—Brothers Moore, Maryland; Whitehead, New Jersey; Dinwiddie, Indiana; Sisters Blanton, Virginia; Wayne, New York.

Commercial Relations—Brothers Rosa, Delaware; James, Maryland; Thing, Maine; Sisters Booth, Colorado; Sherwin, Wisconsin.

Resolutions—Brothers Ware, Massachusetts; Nicholson, New Jersey; Sisters Ellis, Ohio; Baylor, West Virginia; Adams, Minnesota.

Master's Address—Sisters Moore, Maryland; Ware, Massachusetts; Woodman, Michigan; Piolet, Pennsylvania; Sims, Kansas.

Executive Committee's Report—Brothers Steele, California; Wilson, Florida; Lipscomb, South Carolina; Sisters Smith, Georgia; Steele, California.

Lecturer's Report—Brother Wilson, Florida; Sisters Chase, New Hampshire; Rosa, Delaware; Booth, Colorado; Sherwin, Wisconsin.

Accounts—Brothers Sims, Kansas; Eshbaugh, Missouri; Wayne, New York; Sisters Woodman, Michigan; Ware, Massachusetts.

Claims and Grievances—Brothers Aiken, South Carolina; Alexander, North Carolina; Booth, Colorado; Sisters Steele, California; James, Indiana.

Mileage—Brothers Ellis, Ohio; Sherwin, Wisconsin; Sisters Rosa, Delaware; James, Indiana; Sims, Kansas.

Foreign Relations—Brothers Lang, Texas; Rosa, Delaware; Piolet, Pennsylvania; Shirley, Oregon; Alexander, North Carolina.

Education—Brothers Harwell, Tennessee; Chase, New Hampshire; Sisters Moore, Maryland; Nicholson, New Jersey; Blanton, Virginia.

Order of Business—Brothers Woodman, Michigan; Moore, Maryland; Ellis, Ohio; Lipscomb, South Carolina; Harwell, Tennessee.

The resignation of Mr. O. H. Kelley, the Secretary of the order from the time of its institution, was offered and debated, but the subject was adjourned for a day in hope that the resignation might be withdrawn. In the evening the members of the National Grange waited upon the Governor at his reception.

On the third day, Master Adams's indisposition continuing, the Overseer took the chair, and the roll of States was called. Massachusetts desired that the Grange should take action for the publication of a journal to represent its interests. Texas presented a resolution that the Grange memorialize Congress in behalf of a strict quarantine to exclude yellow fever from the Southern States. Virginia offered a resolution to memorialize Congress for the removal of the onerous tax on tobacco, and from two States came resolutions asking the Grange to memorialize Congress to make the Commissioner of Agriculture a Cabinet officer. The resignation of the Secretary was accepted with regret, and Mr. William M. Ireland, of Washington, D. C., one of the founders of the order, was elected to the vacancy, his salary being placed at \$800 a year. The United States Commissioner of Agriculture has sent, for the inspection of the Grange, samples of sugar made from sorghum. Among other products exhibited at the hall are specimens of wheat and apples from Oregon; 10 varieties of apples from Michigan, brought by Overseer Woodman from that State; specimens of woolen goods from the Grange warehouse at Steubenville, Ohio; samples of woolen cloths manufactured at the Grange co-operative factory in Greenbrier county, West Virginia.

Additional notes of the meeting may be expected hereafter.

SACRAMENTO GRANGE.—We learn that Sacramento Grange had a happy time throughout, at their anniversary meeting last week. We are in hope of receiving some account of the same from Bro. J. V. Webster, in time for next week's Press.

Election of Officers.

LODI GRANGE, No. 92, SAN JOAQUIN CO., CAL.—Election, Dec. 4th: O. O. Norton, M.; R. Pixley, O.; Mrs. C. P. Allison, L.; J. M. Fowler, S.; E. Sabine, A. S.; Mrs. O. O. Norton, C.; A. W. Gove, T.; Mrs. A. W. Gove, Sec'y; L. M. Morse, G. K.; Mrs. R. Pixley, Ceres; Mrs. L. M. Morse, Pomona; Mrs. S. Ferdin, Flora; Mrs. J. M. Fowler, L. A. S.

TEMESCAL GRANGE, ALAMEDA CO.—Election, Dec. 7: P. H. McGrew, M.; J. P. Condon, O.; A. T. Dewey, L.; C. Bagge, S.; Wm. Watts, A. S.; Mrs. A. T. Dewey, C.; L. Frink, T.; John Collins, Sec'y; J. V. Webster, G. K.;

Mrs. L. Frink, Ceres; Mrs. Brooks, Pomona; Mrs. P. H. McGrew, Flora; Mrs. N. G. Babcock, L. A. S.; Mrs. J. V. Webster, Pianist.

WOODBIDGE GRANGE, SAN JOAQUIN CO.—Election, Dec. 3: Ezra Fiske, M.; Samuel Woodruff, O.; Sister L. M. McIntosh, L.; H. M. Wood, S.; H. C. Gillingham, A. S.; W. B. White, C.; F. A. Perley, T.; J. D. Huffmau, Sec'y; E. J. McIntosh, G. K.; Sister White Ceres; Sister Ashley, Pomona; Annie Woodruff, Flora; Eliza Grier, L. A. S. James L. Hutson, Trustee for three years.

*Secretaries of Subordinate Granges are invited to send us for publication, lists of officers as soon as they are elected; also dates of installation.

Some Bad Golden Eggs.

[Written for the Press by C. L. ANDERSON, M. D.]

The goose that has been laying golden eggs for some infamy-deserving wretches is very sick. I hope she will die. The stock gambling in teachers' examination papers is a business, by the side of which pools, faros, and other similar games are comparatively innocent.

The tone of the public press at the recent exposures of corruption in some parts of our common school system has been unanimously severe and indignant in condemnation of those engaged in this traffic. Justly-deserved infamy should follow the operators—those who have bought and sold examination papers—everywhere and to the latest times.

The strongest guard should be placed against such traffic, and the penalties for transgressors should be of the severest kind. No one tainted with such criminality should be retained in any department of the school system. No department of the public service, or any public duty requires greater purity. It is not simply a matter of dollars and cents, it goes deeper into our lives and reaches further into the welfare of our nation.

But our press and our most influential educators, so far as I have seen, have not struck quite deep enough. They have struck hard—perhaps have wounded some friends as well as enemies. A little sober reflection and consultation may show what step we should take next.

What are the needs for these examinations at all? Possibly when we come to think, we may conclude that we can live and prosper just as well without them. In fact are they not after all wrong in principle? It seems to be the almost universal opinion that they are no fair test of scholarship. It is a well-known fact that our very best scholars could not get even a third grade certificate in one of these examinations without a long and tedious process of cramming in a line with the kind of questions usually propounded. Everybody knows what is meant by the "kind of questions." Some of them are fair enough. Many are absurd and could not be answered on account of their absurdity. Often they are proposed by persons knowing nothing of the subjects. And so on. They have met with a good share of very just maledictions, and there is no use to waste words about them any longer. Perhaps, reader, if you or I had to propose so many questions we would not succeed much better in getting people to guess at the answers. Do you not think it would be better to lay the whole system on the shelf? We have plenty of institutions of learning where teachers can be educated with a view to their profession.

We have grammar schools, high schools, normal schools, universities—private and public. If not enough, let us establish more. A State Board of Practical Educators might prescribe courses of study to be adopted by these schools. So that a graduate, having passed regularly, one of these courses, shall be entitled to teach in a grade corresponding to the course from which he graduated.

Having passed a course of this kind, in some thorough school of good, reputable standing, there is no reason why a person should appear before any other board of examiners and go through what is generally considered a serious kind of farce, in order to get a license to teach. It is an unmitigated, gross and expensive kind of fraud. It is unfair to the profession of teachers to admit persons by such a "cut-off;" and especially when they are dishonest enough to purchase their certificates. And for the same reason it is unjust and demoralizing to the public. It is a discouraging, degrading and serious blow to well-merited scholarship. It causes a great deal of vexatious work for State, county and city Superintendents, and consumes a great deal of time that might be spent more profitably to the State in hunting grizzlies or trapping gophers!

It opens up an enterprising field, where villany may be taught to the young in a few easy lessons. Nevertheless, it will not do to fly to evils we know not of. There may be worse things than Boards of Examination and question papers. Fraud and infamy are not confined alone to school departments. While about it we hope the guilty parties will be exposed and driven from all connection, at least, with the schools. In the meantime let the faithful friends of common school education consider in council what is best to be done.

CONGRESS is to be petitioned to replace the \$1,600,000 registered bonds lately stolen from the Manhattan bank, New York.

AGRICULTURAL NOTES.

California.

ALAMEDA.

THE RAINFALL.—Times, Dec. 7: Mr. Hutchison of the Bay Nursery reports the rainfall recently, at .21 inches, making the total for the season 3.28 inches. In San Francisco only .14 inches fell, and the total there to date is 2.44 inches. In 1876 the total to December 6th was 4.01 inches and in 1877, 2.47 inches.

COLUSA.

MANIFOLDING CROPS.—Sun, Dec. 7: Hon. T. J. Hart has an apple tree on his premises which is now bearing the sixth crop of apples the present season. The first crop ripened in June, four more crops came to maturity, and now the tree has the sixth crop, the fruit of which are small. If any person has a tree which can compete with this we should be glad to hear from it. Down at Edward Graham's, the other day, on Grand island, we ate potatoes of the second crop. They were dug, and the same potatoes again planted and matured. The second crop was as good as the first. We notice elsewhere a statement of a Stockton paper of a crop of wheat, and then a crop of potatoes, and we believe that practicable on much of our river land. After the second crop of potatoes is dug the land is left in excellent condition for wheat. We have such a big country, and so much land, that we have, as yet, only been doing surface farming.

FRESNO.

ELEGANT FRUIT.—Republican, Dec. 7: We were presented last week with a Japanese persimmon from a tree cultivated and owned by Mrs. Moore and daughter, of the Central colony. The fruit was the size of a large peach or apple, with smooth, glossy skin, very nearly the color of an orange, and with the sweet, rich flavor peculiar to this fruit. These trees were only set out as little twigs last spring, and Mrs. Moore is credited with having produced the first specimen of this ripe fruit ever grown in Fresno county. We also acknowledge the receipt of a beautiful orange from a tree belonging to Mr. Fresh, of the same colony. The trees were set out two years ago last April, but as water for irrigation was not provided, the leaves withered and dropped off, and they were barely kept alive by occasional buckets of water for the first year. Last year they grew well, and this season one tree has produced 56 large and luscious oranges. If any doubt the practicability of raising both persimmons and oranges without artificial protection in this locality, let him visit the little farms of Mrs. Moore and Mr. Fresh at the Central colony.

LAKE.

EARLY WORK.—Bee, Dec. 7: Our friend, William Gessner, of Scott's valley, has finished sowing his grain, and has a portion of his corn land plowed. He begun with the first rains and has steadily pushed his plows since. His grain will all soon be up and growing, and he can rest from his labors during the storms of winter. This, in our humble judgment, is the way to farm, and we venture the assertion that whether the season is a dry or wet one, Mr. Gessner will make more to the acre than those who wait until after Christmas before sowing.

LASSEN.

HAY FOR OAKLAND.—Lassen Advocate: In payment for stock and hay purchased within the last few weeks, the firm of Hayes & Carrick, of East Oakland, have paid in cash, to the citizens of Honey Lake valley, over \$100,000. More hay is wanted, but there is no more to sell. Who says we have no market, and that we cannot raise anything to sell? Come to Lassen county, ye numerous idlers and go to work in a locality where you can sell all you raise and raise all you want to sell.

CATTLE CORRAL.—At Chamberlin's station in Long valley, Reuben Chamberlin is building a large corral where he can accommodate cattle when on the road for Reno. It will be large and high and strong enough to hold wild cattle safely, and will no doubt be well patronized by the numerous drovers who take stock to market from Honey Lake valley.

LOS ANGELES.

THE PASSING SEASON.—Herald, Dec. 7: The excessive rainfall of the last season not only spoiled the Los Angeles grape crop but the barley as well. It has left the grain of a class which is rated as "feed," not "brewing." Very little brewing barley has been raised in Los Angeles county this year. Even our local brewers have had to go to Tehachapi to purchase the grain they are using in manufacturing their beer. We learn, however, that our farmers are sanguine of making better crops this year on even a minimum rainfall. There will, besides, be any quantity of "volunteer" crops which will only need harrowing to insure a fine yield, and, in this manner, our producers will be compensated for the unsatisfactory experiences of the past season.

MENDOCINO.

POTATO.—Dispatch, Dec. 7: Mr. H. Lockhart, of Noyo, brought to Ukiah a potato weighing 6½ pounds, which he raised on the Marsh lots near Ten-Mile river.

MONTEREY.

DIVIDING LANDS.—Democrat, Dec. 7: It is the intention of J. D. Carr, at an early date, to have thorough surveys made of the Gabilan and Aronas ranchos, the first named in this

and the latter in San Benito county, with a view to selling of both in comparative small farms. The terms of sale will be made very liberal by him, ten years time for payment being given, at moderate interest, excepting a small cash payment being required as earnest. In conversation with us Mr. C. said he was well aware that large holdings of land are adverse to the interests of the country, and that he means in thus breaking up the grants in question to conform with that view.

PLACER.

RAISINS.—*Herald*, Dec. 7: We received last Thursday from Mr. Herndon Barrett, the proprietor of the old Nickerson ranch in this county, a box of raisins, and they were in every way superior to anything of the kind we ever saw, and were pronounced by others who saw them to be a very superior article. We were shown some apples put up by Mr. Barrett, of like superior quality, and we understand that he has a large quantity of almost every kind of fruit, all bearing the same stamp of excellence. Mr. Barrett cures his fruit by the Alden process.

SACRAMENTO.

STATE SURVEY.—*Bee*, Dec. 7: State Engineer Wm. M. Hall has made a primary report to the Governor of the work done by the State Survey. The report takes up two columns and a half of fine type, but is principally a review of the bill passed by the last Legislature, a statement as to what work the Survey has to do, and how many men it has employed, with a sprinkling of a few facts well known to the public. The only really new thing in the whole report, is the statement that so far the Survey has cost \$25,528.50. Only \$100,000 was appropriated.

SAN BERNARDINO.

POTATOES.—*Semi-Tropic*, Dec. 7: Irish potatoes weighing two pounds are not very common, but we have been presented with a couple which tip the beam at two and three-quarter pounds each. These potatoes are smooth-skinned and almost a perfect oval in shape, and are a fair sample of the whole lot brought in. They are of the Snowflake variety and possess an excellent flavor, and are dry and mealy. They were raised in the San Geronio pass, about four miles from Dr. Edgar's place, by Messrs. Meeks & Wiltshire. These potatoes, though far above the ordinary size, were small compared with three which were picked out of the lot. These weighed, respectively, 7½, 5½, and 4½ pounds, or 17½ pounds for three potatoes. This lot of potatoes was grown without irrigation and averaged, when dug, 15,000 pounds to the acre.

KILLING ALFALFA.—*Riverside Press*, Dec. 7: To kill alfalfa, lots of which are being plowed up on account of being in the wrong place, take a sharp plow, set it to cut two inches deep, and turn the furrow well over. This cuts off the root just below the crown, and does not leave enough top and root in one piece to grow again. A thorough trial will convince any one that this plan will kill it. Better do this when the pasture is pretty dry, even at the risk of dulling the plowshare.

SAN DIEGO.

THE PROSPECT.—*News*, Dec. 7: It looks like our county ought to feel easier and better than a year ago. We believe that it does feel better and easier, and that, really, there is more money in the county than for a good while before. The honey crop is large, and though prices are low, it ought to return the producers \$25,000. The grain crop will do as well perhaps, though we are not so sure of that, while for other articles there have been fair returns made. We have heard it said that there is better inquiry for lands, though in town, in the run of our business, we have not noticed that as a fact. There may be an improvement about Santa Margarita, and no doubt it, which will extend to other parts of the county in due time. The most considerable drawback that we hear of at present is the large amount of grain unthreshed, and the uncertainty as to when the rains will come. Some fear that the rains may interfere with the threshing; but few of us can make a good guess at that event. A few days more of clear weather will finish the threshing, and with the exception of the removal of the grain to town, nothing will interfere to early plowing, as soon as the ground is fit for it.

PEACHES.—Mr. Warren Kimball sent into town yesterday, to Mr. Walsh, some of the nicest and best peaches that we remember to have eaten at this season of the year. They were what is called the December peach; a white cling, large and juicy; well worth the care and attention that must be given a peach. More of them ought to be planted.

HONEY.—Along in the commencement of the season the crop was estimated at 500,000 pounds by many, and by others a little higher. The figures given will show the estimate put upon it by the bees themselves, the aggregate weight of honey going forward to this date being 1,189,050 pounds. This shows that the yield will exceed the crop of year before last, the particulars about which we have given heretofore. This is a splendid return, and by most apiarians quite unexpected. As to the amount of honey yet to come in, we can form no reliable estimate, but it is yet considerable.

OLIVES.—At the Horton house may be seen a couple of twigs out from an olive in the orchard of the Kimballs. The twigs hang full of olives, and are the twigs from a four-year-old cutting olive. The yield of the fruit tree was 10 gallons, five of which were gathered at the first gathering and five at the second.

SAN JOAQUIN.

AGRICULTURAL SOCIETY MEETING.—*Independent*, Dec. 7: The San Joaquin Valley District Agricultural Society, under the present management has reached a sound financial basis, and is to-day the most prosperous society in the State. It is out of debt and has money in the treasury, while its buildings, track and other assets foot up a total valuation exceeding \$25,000. It was the only society in the State that paid running expenses this year. The society is about to build a magnificent pavilion that will be an ornament to the city.

THE WEATHER AND RAINFALL.—*Herald*, Dec. 7: The rainfall last evening at the Asylum, according to the report furnished us by W. M. Trivett, was .03 of an inch, making the total for the season to date, .88 of an inch. In order that the alarmists may not be needlessly alarmed, we will state that the difference between the fall this year and last at this date is only .26 of an inch, not enough to insure a good crop or to make much difference either for or against.

THE CHICORY INDUSTRY.—The chicory industry in this county seems to be thriving and assuming very respectable proportions. There are two firms engaged in its manufacture and the daily product is upwards of 40 barrels. The demand for the chicory produced in this county is constantly increasing, because the chicory raised here commands a higher price than the imported article. Upwards of 200 acres will be planted to this vegetable next season. When one reflects that all this chicory is used to adulterate coffee, and that the prepared coffee from establishments in San Francisco is to a very great extent chicory, one cannot avoid feeling quite a lively interest in the chicory business. As the chicory business increases it will be so much the more difficult to get a really good cup of coffee, although the difficulty of getting a good cup of chicory will be correspondingly lessened.

"MEDORA" SOLD.—Yesterday "Medora," famous three-year-old Hambletonian, was sold to M. C. Livingston, of San Francisco, for \$6,000. "Medora" was owned by J. A. Louttit, Esq., and was raised in this city by Walter E. Morris, and from the time she was a month old has been one of the best known specimens of horse flesh in San Joaquin county.

SANTA CLARA.

DECEMBER RASPBERRIES.—*Mercury*, Nov. 30: W. H. Oweus, has our thanks for a treat of as luscious red raspberries as we have seen in many a day. By the way, what would our Eastern friends think of delicious strawberries and raspberries grown and ripened in the open air, on the first day of December? Such luxuries are not at all uncommon with us. In fact, there has not been a day since the first of last May when these fruits could not have been had in our market.

SOLANO.

FARMING PROSPECTS.—*Dixon Tribune*, Dec. 7: Most of our farmers have been trying to plow since the rain, but find it rather dry, except, of course, adobe soil. In one respect it is a good time for plowing, because the weeds have all started, and if plowed under now will be killed. In the middle and southern portions of the county considerable plowing was done before the last shower, the ground being in better condition for it there than here.

SONOMA.

THE BOSS BEE TREE.—*Healdsburg Enterprise*, Dec. 7: W. H. Hixon informs us that while on John Rodgers' ranch in Mendocino county recently, he and his brother Jas. Hixon, cut a bee tree that contained 183 pounds of honey. This is undoubtedly the boss tree, and Mr. Hixon says that he has witnesses to prove the correctness of his statement.

VENTURA.

GOING INTO FLAX.—*Free Press*, Nov. 30: Messrs. Evans, Chrisman and Willoughby have leased 1,000 acres of the plateau at the eastern end of Messrs. Schiappapietra's ranch, and are now working some 60 horses in plowing it up, preparatory to seeding it with flax, so soon as the rains come. We are glad to notice this fact, as from the experience hitherto of Mr. Richards, Mr. Evans and others we are satisfied it is a much more profitable crop than barley, and more certain in this climate than wheat. In fact, almost any crop is better than barley, except perhaps on the Colonia ranch, the soil of which seems peculiarly adapted to the growth of that grain.

THE SOIL.—*Free Press*, Dec. 7: From the observations of Mr. Cannon and other careful observers, we are satisfied that seven inches of rain this year will produce an abundant crop. On that gentleman's ranch, which is as dry perhaps as any valley land in the county, moisture can now be found at a depth of five inches—in fact, in pulling up corn stalks, moist ground is frequently seen. On the mesa land of the Schiappapietra ranch, at quite an elevation, wet ground is found at a depth of fifteen inches.

YOLO.

A BIG ROOSTER.—*Democrat*, Dec. 7: Mrs. H. M. Hoyt, of this city, killed a rooster for her Thanksgiving dinner, which weighed, when dressed, seven and one-half pounds. He was of the Cochinchina stock, and was only six months old when he lost his life. One thigh and leg weighed one and a quarter pounds. When she ascertained his weight Mrs. Hoyt regretted having slain him for the feast, as she thinks, should he have attained his full growth, he would have become the champion chancier of the Pacific coast.

News in Brief.

EARTHQUAKE in northern counties Dec. 9th. BLAINE has been shaking hands with Black-burn.

THE fall of the Italian ministers is said to be inevitable.

THE Mexican excursion party leave Chicago, Jan. 4th.

INDIAN depredations continue to be reported from Nebraska.

A CANADIAN loan of £3,000,000 has been placed on the London market.

It is reported that the Ameer has fled because of a revolution in Cabul.

THE Turkish Ministry have been dismissed and new ministers appointed.

GENERAL ROBERTS has gained a complete victory over the Afghan forces.

THE Throckmorton land case has been decided in favor of Throckmorton.

HON. ALEX. H. STEPHENS met with a painful accident at Washington, Dec. 4th.

MONCASI, who attempted to kill the King of Spain, has been granted a new trial.

An ex-member of the Ohio Legislature, has been convicted at Cincinnati of perjury.

FLOURDUST explosion has caused the destruction of another Minneapolis flour mill.

A GRAIN GRADER, the first ever built in this State, is being constructed at San Francisco.

It is proposed by the Austrians to appropriate 20,000,000 florins as occupation expenses in 1879.

HENRY TAYLOR & SONS, grain and flour merchants, Glasgow, have failed. Liabilities, \$650,000.

PREPARATIONS for the Sydney International exhibition of 1879 are progressing very satisfactorily.

Our treaty with Japan is to be modified with a view to increasing the commerce of both countries.

SENATOR MITCHELL, of Oregon, has introduced a bill in Congress for the improvement of Coos bay.

THE condition of the iron and coal trades in the South Staffordshire district, England, is growing worse.

SEÑOR ZAMACONA, Mexican Minister, addressed the merchants and business men of Baltimore November 30th.

It is reported that Charley Ross has been found again, this time in Bradford county, Pennsylvania.

THE President has nominated Charles H. Chambers to be Receiver of Public Moneys at San Francisco.

THE Chatterly (Eng.) Iron Company have refused the offer of 900 men to resume work at a reduction of 5%.

DISTANCES FROM SAN FRANCISCO.—The South Pacific Coast R. R. (narrow-gauge), furnishes the following schedule of distances on its line from San Francisco: To Alameda Point (by fast steamer), 5 miles; Alameda, 10; West San Leandro, 10; West San Lorenzo, 17; Mt. Eden, 21; Alvarado, 24; Hall's, 25; Newark, 30; Mowry's, 31; Alviso, 38; Agnew, 41; Santa Clara, 44; San Jose, 46; Lovelady's, 51; Los Gatos, 56; Alma, 58. This is the shortest and quickest railroad line from San Francisco to San Jose, and in several respects the pleasantest. It is also rapidly increasing in freight and passenger traffic and general popularity.

PACIFIC NURSERIES.—These nurseries, owned by Frederick Ludemann, are located on Baker street between Lombard and Chestnut streets in this city. They are easily accessible by the street car lines. When the visitor is on the ground he finds a very gratifying stock of desirable trees, shrubs and flowers, including the rarer growths which amateur florists most delight to possess. The Pacific Nurseries do much interior business by mail and express, and their catalogue should be consulted by all desiring fine plants.

MORE POLAND-CHINAS.—It is apparent that the Poland-China breed of hogs is gaining ground in this State. We saw at Wells & Fargo's office in this city, on Monday, three pigs just received by Falkner, Bell & Co., of this city, from the D. M. Magie Co., of Ohio. They were imported for a gentleman in Solano county. The pigs came through in splendid condition. There were two sows and one boar, all three months of age, and the weight averaged 70 lbs. each. They were handsome as pictures, and fine specimens of a widely popular breed.

The "Press" in Arizona.

Henry R. Ewald left San Francisco on Tuesday of this week for Arizona. He will visit various parts of that promising Territory in the interest of our paper, receiving subscriptions, taking notes for publication, etc. He is well and favorably known in Oakland, California, as well as in the Territory, where he has resided for years. It is our intention, as far as we can gain facts, to give prominence to the real and permanent interests of our neighboring Territory. With her our State is becoming more and more intimately connected every day, and that literally; for it is said that, as early as the day after the publication of this notice, regular trains will be running from Yuma to Gila City. This is only the first short step in a progress which is to reveal to the outside world more clearly than ever before the vast resources—mineral, agricultural and grazing—of Arizona. Any assistance given to a gentleman, who, like Mr. Ewald, will have it in his power to publish to the world what he sees and hears, will be an act of friendship to the Territory, whose advancement we all wish to encourage.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING NOVEMBER 26TH, 1878.

MACARONI MACHINES—Giocomo Grondona, S. F. FRUIT AND PACKING BOXES—Matthew Cooke and Robert J. Cooke, Sacramento, Cal.

BOX FASTENERS—Matthew Cooke and Robert J. Cooke, Sacramento, Cal.

HOSE CARRIAGES—John Wihz, Santa Cruz, Cal.

MEN AND BOYS' CLOTHING—Trademark—Banner Brothers, New York, New York and San Francisco, Cal.

FOREST PLANTING.—We had the pleasure of

a call the other day at the new forest tree depot of Bailey & Co., at Adeline Street station,

on Seventh street, Oakland. This firm has for several years made a specialty of Australian

forest trees, and now we believe can claim the distinction of being the largest propagators of

gum trees on this coast. The new depot in Oakland has commodious grounds attached, but

it is only the depot for filling the immediate wants of the trade, the propagating grounds

being located in Berkeley. Bailey & Co. make a special business of planting forests on an

extensive scale, and are ready to take contracts for planting unoccupied areas anywhere in the

State, and planting in such a way that the trees will succeed even in forbidding locations.

They do not shrink from making the eucalyptus grow on barren sand hills and other waste

places. We doubt not their faith and their works will be of value to many who have un-

profitable lands which they wish to cover with a growth of timber. They showed us vigorous

and long-rooted seedlings, which seemed well adapted for this purpose. Instances of what

can be done in a short time with eucalyptus planting may be seen near Oakland. On Per-

alta heights, half a mile north of East Oakland, there was a tract which a year ago was a bare

hill-top. A great change has already been wrought by eucalyptus growth planted by this

firm, as any one interested in the subject can see. A quarter of a mile farther on is the forest

of gums planted by Gen. Williams. The plants were put out three years ago, and some

of the trees are now 30 feet high. Enterprises of this character constitute the main business

of Bailey & Co., but in addition they have a good stock of Monterey cypress and other trees.

The stock of Japanese persimmons, dwarf oranges, cinnamons, camellias and other Oriental

flowers lately imported from Japan by M. D. Starr, are now in the hands of Bailey & Co., and

are available to those desiring to introduce these desirable growths.

HOLIDAY SOUNDS.—Now that the holidays are approaching, the voices of Paillard's music

boxes are sounding full sweetly. We have several times spoken of the excellence of these

little caskets of melody, and their fitness for holiday gifts is plainly shown by the large sales

being made. The store of M. J. Paillard & Co., 120, Sutter street, San Francisco, is well worth a visit.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great

educator, the Zoographical. Each department increases daily, and the Pavilion performances are more popular

than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

POPULAR MUSIC.—Make your homes merry and popular with choice music from Gray's Music Store, S. F. We

can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in

instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. The Rural Press can offer to introduce you there.

SUBSCRIBERS to the *California Agriculturist* now receiving the PACIFIC RURAL PRESS will please at once

notify this office, direct by letter or postal card (giving their name and address) whenever they wish the paper discontinued.

SAN JOSE is the position as a popular place of residence on this coast, and James A. Clayton is its leading agent for the sale of city and country real estate. See advertisement.

SEND to Edward Frisbie, Anderson, Shasta County, Cal., for illustrated circular containing agricultural lands in that county—where the climate is excellent and crops are certain.

THE celebrated Troy (N. Y.) shirts can be found at Palmer Bros., No. 726 Market street, San Francisco. They keep a full and complete stock, handired and unhandired, of men's and boys' sizes of the above make.

WHEN A LADY wants a cloak or suit for herself or child and feels in doubt where to buy it, we cheerfully recommend her to go to Sullivan's, No. 120 Kearny street, San Francisco, where she can always find the cheapest and best assortment.

A FLOURING MILL is wanted at Reading, the head of railroad transportation in Shasta County.

Chew Jackson's BEST Sweet Navy Tobacco.



Her Rose Garden.

Being a Tale of Two Young Married People, and their Gardening Mishaps.

[Written for the RURAL PRESS by CHARLES H. SHINN.]

CHAPTER III.

In about eight or ten days the sweet alyssum put in an appearance, and the box was crowded full. Then the delphinium made its bow, and shortly afterwards the lobelia and pansy; and so, lagging along at varied intervals, all the rest, one after another. When the seedlings were fairly up they were gradually inured to the sun, or "hardened," and thinned out where they stood too thickly.

After a space of several weeks they were ready to transplant. One thing troubled Mrs. Bailey—

"John," said she, one morning, with an assumption of solemnity, "I have an arithmetical question to discuss."

"Don't you do it," replied the individual addressed, "I would rather discuss this beefsteak. Please let me off, lady Marian. Don't bother a fellow with debts, percentages and deficiencies until after breakfast."

Mrs. Bailey laughed. "But, John, what if it is a surplus?"

"Why, then, proceed!"

"John," said she, "there are one hundred and sixty square feet in our garden. Well, I have over two hundred petunias and pansies alone! What on earth shall I do with all the rest?"

Mr. Bailey said nothing, wrapped himself in a brown study, walked out and looked at the plants, and went off to his daily work. This, at night, was the result—

"Marian," said he, "do you remember the forlorn-looking schoolhouse in this district?" Yes, Marian remembered that. "And do you know how many gardens we saw once whilst riding seventeen miles?" Of course she knew that—there was only one poor little garden!

"Well," he continued, "I don't see how we are to make any money out of our surplus stock otherwise than by giving it away."

Mrs. Bailey answered, with mock-heroic gestures, "Truly, shall we not thereby save the country?"

"We shall help to do it," was his cheerful response. "We may be able to do a great deal of good in the neighborhood, if we only use tact and judgment. We must say they are choice, and must be taken good care of, and we mustn't seem too anxious to give them away."

"O dear," said she, drawing down the corners of her rose-bud mouth, "I was just imagining how unique a sign—'Plants given away here, not sold'—would be on our gate-post! How the teamsters would stare!"

In a few weeks more the garden was filled in every nook and corner with transplanted seedlings; not too close, however, for successful blooming, and they were all watered, and shaded with little bunches of grass from the roadside. The canary-bird vines were put by the fence, and the lobelia made an edging for the walk. There were not any asters or canary-bird vines to spare, but there were lots of everything else.

By this time the sweet peas were half-way up their rustic lattice-work; the spirea was past its fullest perfection of bloom. Among the roses, Bella, Bon Silene and Isabella Sprunt had already furnished half a dozen buds apiece.

"In this rose garden," said Mrs. Bailey, "there shall never be any full-blown roses. I'll pick buds and half-open roses, and so keep them from becoming *blase* and *passee*."

Meanwhile the smilex in the house, by virtue of constant care, had reached the middle of the window and extended from side to side. The fuchsias, on a little stand just below, were loaded with buds and flowers. The winter-blooming begonia forgot that winter was over and bloomed without intermission all spring, even to the gates of summer.

It was with a rejoicing look over her little garden that Mrs. Bailey, one sunny afternoon, gathered the prettiest flowers she had and filled a cigar box with little plants. The forlorn-looking schoolhouse, of which her husband had spoken, showed dimly on a ridge nearly a mile away. Thither she turned her steps, and, not without certain feminine flutterings, introduced herself to the teacher, a worn-looking and elderly lady.

By some inscrutable drift of circumstances she shortly found herself on the floor, addressing the pupils in a manner which John declared, from her fragmentary report afterwards, was simply inimitable.

She told them how beautiful flowers were, and how easily folks might have gardens if they tried. She made them laugh with a description of her own funny little garden; finally, she asked if they would not prepare a few flower-



THE WATERMILL.

Listen to the watermill, through the livelong day,
How the clicking of its wheel, wears the hours away.
Languidly the autumn wind, stirs the greenwood leaves;
From the fields the reapers sing, binding up the sheaves.
And a proverb haunts my mind, as a spell is cast—
The mill will never grind with the water that is past.

Autumn winds revive no more leaves that once are shed,
And the sickle cannot reap, corn once gathered;
And the rippling stream flows on, tranquil, deep and still,
Never gliding back again, to the watermill.
Truly speaks the proverb old, with a meaning vast—
The mill will never grind with the water that is past.

Take the lesson to thyself, loving heart, and true;
Golden years are fleeting by; youth is passing, too;
Learn to make the most of life, lose no happy day,
Time will never bring thee back, chances swept away;
Leave no tender word unsaid, love, while love shall last—
The mill will never grind with the water that is past.

Work, while yet daylight shines, man of strength and will,
Never does the streamlet glide, useless by the mill;

Wait not till to-morrow's sun, beams upon thy way,
All that thou can't call thine own, lies in thy—*to-day*;
Power, intellect and health, may not always last—
The mill will never grind with the water that is past.

Oh! the wasted hours of life, that have drifted by;
Oh! the good we might have done, lost without a sigh!
Love that we might once have saved, by a single word,
Thoughts conceived, but never penned, perishing, unheard.
Take the proverb to thine heart, take and hold it fast—
The mill will never grind with the water that is past.

Oh! love thy God and fellow-man, thyself consider last;
For come it will, when thou must scan, dark errors of the past;

And when the flight of life is o'er, and earth recedes from view,
And Heaven in all its glory shines, 'midst the pure, the true—
Then you'll see more clearly the proverb deep and vast:
The mill will never grind with the water that is past.

—Anonymous.

The Spelling Lesson.

[Written for the RURAL PRESS by JESSIE ABRIEL.]

When I was a boy my elder brother delighted me with a list of over one hundred conundrums. I think that the study of them served not only to amuse but somewhat to sharpen my wits.

Some of the young readers of the PRESS find pleasure in solving hard questions in arithmetic or algebra. There is an open field in these studies for the exercise of reason and judgment as well as memory. In all mathematical questions there is a foundation of axiom, definition, or principle upon which to build your argument, and in most cases you can test the correctness of your answer.

But custom requires of younger pupils a long list of more difficult questions, which they must solve without any sure guide, axiom, definition or principle. As an illustration of what I refer to, please examine the following problem: Given the sentence; "George Leonard McLeod, one of the common people called yeomanry in feudal times, bestowed bounteous and gorgeous economies on John Bunyan as a righteous theologian who wrote theology in a dungeon."

Find the value (sound), of eo.
Another, "What notion of orthodoxy had Poe the poet when rhyming fellow with canoe?"
Find the value of oe.

Now I am confident that there never was a child, who, after being able promptly and correctly to read and write each of the above sentences, could either pronounce the next word he saw which contained one of these combinations, or could write the next word he heard in which fashion requires either of said combinations. These questions are entirely too difficult for any pupil to solve unaided. The best effort is mere guess work, there is no way out of the difficulty but by the aid of others. This disparages reason and invention and destroys self-reliance.

It is a stultifying process continually to set pupils problems they can not by any means solve, problems that require the constant aid of others, problems that are to be decided by authority and not by reason. The child is humiliated every time. The judgment is deadened and memory of little things enthroned over all. Is it not time that such folly was embalmied and laid upon the shelf among things that were? Think of one million of little children in these United States, coming fresh into our schools every year, who are doomed by pedantic fashion to undergo the tedious, unprofitable drill! To subject invention and reason to mere memory and authority, Herod killed little children outright, we torture and dement them.

A FEW days ago a lady of Bloomfield, Iowa, went to the postoffice and asked for some stamps. The clerk handed her some green ones. She asked him if he didn't have some pink; her stationery was pink, and she wanted stamps to match.

How Should a Girl be Educated?

[Written for the RURAL PRESS by PORTIA.]

There have appeared in several of the recent *Nations* a number of articles devoted to the discussion of that much agitated topic, the education of women. They were called forth by a letter from an anxious father, (?) who, having some daughters growing up, is diligently seeking for a proper school in which to place them. This there seems no present likelihood of his finding, as his views differ somewhat from those held by the majority of parents and teachers. He confesses that he is an "old fogey" and cares nothing for the "higher culture" of women. In his estimation, health is the one important consideration. Feeling greatly dissatisfied with the present modes of education, by which a girl leaves school with a superficial knowledge of a great number of subjects, and, too often, with delicate health, he is inquiring for a school where a great deal of attention is paid to physical culture, and hardly any to the culture of the mind. He wishes his daughters to graduate from this school, with a taste for study, and a proper appreciation of the vast amount they have yet to learn—but, above all, with sound health; it being his opinion that so long as the physical health is perfect, the brain will take care of itself.

An editorial on the same subject may be briefly summed up as follows: That the object of education should be to give a real preparation for the probable occupation in life; that taking the marriage census of England, as a guide, we find that 80% of the women who reach a marriageable age marry, and that, therefore, the education of girls should be such as will best fit them for the life which so large a proportion of them are destined to lead. That sound health is the first consideration for a married woman, as without it, whatever talents and accomplishments she may possess, lose half their value. That in a woman's intellectual education the principal thing is to gain the power of acquisition and to form habits of thoroughness, which can only be accomplished by mastering some one subject—not by dipping into 20 different things. And finally, that a girl should be fitted for her position at the head of a household by practical instruction in domestic economy, and the management of servants and children.

Assuming the correctness of the first two propositions, that education should be an equipment for the active duties of life, and that the position which the majority of women are called upon to fill is that of wife and mother, it is fitting that we should inquire more fully into the nature of a mother's duties. A mother must, of course, be competent to attend to the physical welfare of her children, but she has also a work that is even higher and more sacred than this, in their mental and moral training. To be equal to this task she requires a sound judgment, and a well trained and vigorous intellect. For a mother should be fitted not only to superintend the education of her children during their infancy and childhood, but to be a guide and companion for them when they shall have reached more mature years. It is a most unfortunate thing for a child to know that, however much he may love and respect his mother, in scholarly attainments, he is undoubtedly her superior.

The question of health is of great importance, for without good health one's usefulness is impaired; and besides, there is such an intimate relation between physical and mental states, that any derangement of the one is apt to have an effect upon the other. But still, the preservation of health is only the means, not the end of living. With wise care, mind and body will develop together without injury to either.

In the intellectual education a habit of thoroughness and the power of acquisition are, certainly, of the first importance; and there is not a doubt that the practice of cramming, now only too common, is most pernicious. But, because it is unwise to give only a smattering of a number of different branches, it does not follow that we are to rush to the opposite extreme and teach only one thing. Under good instruction a girl can gain during her school life, a sound elementary knowledge of several studies, and when she has done this, but not till then, she may take up one or two lines of study to be pursued exhaustively.

The *Nation* is perfectly right in regard to the need of a practical knowledge of housekeeping, but this would seem, in most cases, rather a matter for home than for school instruction.

The calling of a wife and mother is not a "small or mean one;" rightly understood, on the contrary, it is one of the noblest in life, but it may become a very narrowing one. If a woman devotes herself to the care of her household to the exclusion of all other subjects, she defeats the very object she has in view, for she soon ceases to be a companion for her husband, or a proper guide for her children. She especially, needs to have breadth and liberality of mind, and these she cannot have if her vision is constantly bounded by the domestic horizon. She must have other interests to refresh and invigorate her mind; they must, it is true, be looked upon as subordinate to her duty to her family, or rather, as a part of that duty, for whatever aids a woman's mental or moral growth, is so much gain to her husband and children.

It may be remarked in conclusion, that although the women who marry are in such a large majority, it is rather hard on the remaining 20% to ignore them so completely, especially

beds in the schoolyard, and, receiving a unanimous assent, the cigar box of plants was divided into two lots. One-half the teacher took in charge for the school grounds, and, from the remainder, each child carried home a few, wrapped up carefully in moist paper.

"Now, children, come and see me some Saturday afternoon, and tell me how they are growing," said pleasant Mrs. Bailey. "Then we can see who has the best garden. And be good people, of course, and don't worry your teacher, and so, good-bye all, I must run home."

That was just a little mite like the way Mrs. Bailey talked; but, dear me! no living writer could imprison her vivacity and merriment and rare delightfulness on any mortal sheet of paper. She made each blessed individual in that brown schoolhouse feel like embodied sunshine. She won their hearts with smile and look. Thereafter she had a host of admirers. It was not many weeks after that one of the little school girls stopped her father, as they were driving past the Baileys' place.

"Papa, please stop here a minute. I want to see the pretty lady's garden."

So they drove in, were cordially received, and that day the child went to school with a precious rosebud close in her hand, and a warm, motherly kiss on her soft cheek.

Long before the month of May began, the neighbors, many of them renters also, had tiny, yard-wide gardens, and boxes of plants on the porch, all from Mrs. Bailey's "surplus stock." Pansies, petunias and double portulaca were to be seen everywhere, bringing a certain strange beauty and rare delight into the quiet neighborhood. As yet it was hardly time for much blossoming; of the year's reward, and of the children's multifarious gardens, let the next chapter relate.

[To be Continued.]

PROGRESS FOR CHINESE WOMEN.—The following is from the Hong Kong Press in regard to a startling innovation made by the Chinese Minister. A novel and striking feature in connection with the Chinese Minister's entertainment in London was the new departure taken by his excellency from the established custom of his country in allowing his wife to be present to do the honors as hostess. What will his fellow-countrymen in China say to such a concession to the foreigner, such a deviation from their social system? The higher class of Chinese, like true Orientals, keep their women strictly secluded from the vulgar gaze. Woman's position in China is not an enviable one. She is looked down upon as an inferior, is seldom educated, and is regarded more in the light of an appendage than as a helpmate, counselor and friend. Even as early as her entrance upon life, she receives a chilling welcome. Chinese parents invariably desire sons, no matter how many children they may have.

"If you can't keep awake," said a parson to one of his hearers, "when drowsy, why don't you take a pinch of snuff?" "I think," was the reply, "the snuff had better be put into the sermon."

as it is impossible to tell beforehand in which category each particular woman shall be. And, moreover, it must be remembered what a large number of women, married as well as single, are obliged to depend upon their own exertions for their support. Any system of education which unfits a woman for more than one position in life is both unwise and unjust.

Banged Hair and Close Dresses.

A correspondent of the *Woman's Journal* thus writes concerning the above fashionable mannerisms of the day. She, for it must be a woman, evidently would have her sisters see themselves as others see them, for her language is plain and applicable to the case:

"Every day I meet in the streets of Boston young ladies, who would otherwise look intelligent, reduced to the appearance of idiocy by a peculiar method of combing the hair down over the forehead. The hideous deformity is evidently copied from the patients of lunatic asylums and schools for the feeble-minded. The effect is shocking. Although not fastidious, I shrink from these ladies as children shrink from a hideous mask. It is a protest against being considered strong-minded that the young women thus assume the guard of idiocy. I am told that a young lady thus degraded is said to have her hair 'banged.' But it seems to me that her sanity must be badly banged to thus deform herself.

"The hot weather of last summer was made more intolerable by the spectacle of women with dresses which clung to their forms with a closeness positively indelicate, dresses drawn back by some strange attachment behind which fetters every movement. If the 'banged' young woman has made my blood run cold, the pulled-back lady throws me into a profuse perspiration out of sympathy with her self-inflicted martyrdom. Will the ladies of the New England woman's club kindly inform me why women thus make guys of themselves?"

Some Men's Wives.

"I tell you what it is," said one of a small coterie of wealthy men who had met in the office of one of their number, "they may say what they please about the usefulness of modern women, but my wife has done her share in securing our success in life. Everybody knows that her family was aristocratic and all that, and when I married her she had never done a day's work in her life; but when W. & Co. failed, and I had to commence at the foot of the hill again, she discharged the servants, and chose out a neat little cottage, and did her own housekeeping until I was better off again."

"And my wife," said a second, "was an only daughter, caressed and petted to death; and everybody said, 'Well if he will marry a doll like that, he'll make the greatest mistake of his life;' but when I came home the first year of our marriage sick with the fever, she nursed me back to health, and I never knew her to murmur because I thought we couldn't afford any better style or more luxuries."

"Well, gentleman," chimed in a third, "I married a smart, healthy, pretty girl, but she was a regular blue-stocking. She adored Tennyson, doated on Byron, read Emerson, and named the first baby Ralph Waldo, and the second Maud; but I tell you what 'tis," and the speaker's eyes grew suspiciously moist, "when we laid little Maud in her last bed at Auburn, my poor wife had no remembrance of neglect or stinted motherly care, and the little dresses that still lie in the locked drawer were all made by her own hands."

Chaff.

MILKMAIDS are different. The milkmaid in the country is different from the milk made in the city.

ROWLAND HILL said of some of the speakers of his day, that they had a river of words with only a spoonful of thought.

"Do not marry a widower," said the old lady. "A ready-made family is like a plate of cold potatoes." "Oh, I'll soon warm them over," replied the damsel, and she did.

PROFESSOR (blandly)—Mr. H—, how did the monasteries acquire so much wealth during the fourteenth century? Sophomore (thoughtfully)—Well, I don't exactly know, sir, unless they passed around the plate at both services.

"So," said a lady, recently, to a merchant, "your pretty daughter has married a rich husband?" "Well," slowly replied the father, "I believe she has married a rich man, but I understand he is a very poor husband."

"JOHN," said a poverty-stricken man, "I've made my will to day." "Ah!" replied John, "You were liberal to me, no doubt." "Yes, John, I've willed you the whole country to make a living in, with privilege of going elsewhere if you can do better."

A METHODIST and a Quaker having stopped at a public house agreed to sleep in the same bed. The Methodist knelt down and prayed fervently, and confessed a long catalogue of sins. After he rose the Quaker observed, "Really, friend, if thou art as bad as thou sayest thou art, I think I dare not sleep with thee."

A FRENCH paper reports a murder trial in which a witness testified that he heard two pistol shots on the staircase and sent his wife to see what was the matter. "Did you not go up the stairs yourself?" asked the court. "No, sir," replied the witness, "I was afraid of the revolver."

Young Folks' Column.

Miss Trot and Her Family.

A Nonsense Story for very Young Folks.

Miss Trot lived in a hut—an old brown hut. Miss Trot had a cat—a small grey cat; The cat had a kit, and the kit was white. Miss Trot had a hen—a fat yellow hen; The hen had a chick, and the chick was speckled. Miss Trot had a cow—a nice mouly-cow; The cow had a calf, and the calf was red; Miss Trot had a sheep—a white woolly sheep; The sheep had a lamb, and the lamb was mottled; Miss Trot had a duck—a black waddling duck; The duck had a duckling, and the duckling was brown. Miss Trot had a goose—an old gray goose; The goose had a gosling, and the gosling was yellow. When Miss Trot came out of her hut to take a walk in the garden, there walked out with her—

The cat and her kit,
The hen and her chick,
The cow and her calf,
The sheep and her lamb,
The duck and her duckling,
The goose and her gosling.

And this was the way they talked:

"Miou, miou, miou!" said Miss Trot's cat;
"Miou, miou, miou!" said Miss Trot's kit;
"Cluck, cluck, cluck!" said Miss Trot's hen;
"Peep, peep, peep!" said Miss Trot's chick;
"Moo, moo, moo!" said Miss Trot's cow;
"Moo, moo, moo!" said Miss Trot's calf;
"Baa, baa, baa!" said Miss Trot's sheep;
"Baa, baa, baa!" said Miss Trot's lamb;
"Quack, quack, quack!" said Miss Trot's duck;
"Quack, quack, quack!" said Miss Trot's duckling;
"Hiss, hiss, hiss!" said Miss Trot's goose;
"Hiss, hiss, hiss!" said Miss Trot's gosling.

—Nursery.

ADVICE TO GIRLS.—Learn to darn stockings neatly, and then always see that your own are in order. Don't let a button be off your shoes a minute longer than needful. It takes just about a minute to sew one on, and oh, how much neater a foot looks in a trimly buttoned boot than it does in a lop-sided affair with half the buttons off. Every girl should learn to make all the simpler articles of clothing, and we know a little girl of seven who could do this, and who also made the whole of a blue calico dress for herself, and pieced a large bed quilt. She was not an overtaxed child, either, but a merry, romping, indulged, only daughter. But she was "smart," and she did not die young either. Indeed, we have seldom known children "too smart to live." Very few ever die of that complaint, whatever their grandmothers may think. So never be afraid a bit of overdoing the business. Help all you can, and study over the business daily. Once get in the habit of looking over your things, and you will like it wonderfully. You will have the independent feeling that you need not wait for any one's convenience in repairing and making, but that you can be beforehand with all such matters. The relief to your weary mother will be more than you can ever estimate.

LEARNING TO SAVE.—The first thing to be learned in the art of getting on in the world, is to save. A boy who is earning 50 cents, 75 cents, or a dollar a day, should manage to save a portion of it if possible. If he can lay by only 25 cents a week, let him save that. It doesn't amount to much, it is true, it is only \$13 a year, but it is worth saving. It is better saved than wasted; better saved than fooled away for tobacco or beer, or any other worthless or useless article or object. But the best thing about it is that the boy who saves \$13 a year on a very meager salary, acquires a habit of taking care of his money which will be of the utmost value to him.

A BOY'S COMPOSITION.—Boys look upon writing compositions as the hardest work of the school. In one school an ungainly but stalwart youth, named John Wolf, refused for several weeks to comply. It was impossible, however, to excuse him, and inasmuch as the refractory boy was at least thirty pounds heavier than his teacher, a terrible crisis seemed at hand. Finally the stubborn scholar concluded to bow to the behests of law, and drew forth a whole sheet of large-sized foolscap, laden with this eminently grave and thoughtful production.

"About Virtue.—Virtue is a good thing to get a hold of. Whenever a feller gets a hold of virtue, he better keep a hold."

A BRIGHT little Shoreham, Vt., boy, who had been engaged in combat with another boy, was reproved by his aunt, who told him he ought always to wait until the other boy "pitched upon" him. "Well," exclaimed the little hero, "but if I wait for the other boy to begin, I'm 'fraid there won't be any fight."

A BOY, while warming his hands at the fire, was remonstrated with by his father, who said, "Go away from the fire, the weather is not cold." "I ain't heating the weather, I'm warming my hands," the little fellow demurely replied.

"Do eagles give milk, mother?" asked the boy. "No, my son; what made you think so?" "Because I've heard of the eagle's scream." The mother reached for her slipper, but the precious youth had vanished.

If Mr. Edison will only invent a process for making confectionery out of sugar, and five-cent cigars out of tobacco, he will be entitled to niche 1, section A, Temple of Fame.

GOOD HEALTH.

Pull up the Blind.

Pull up the blind, Kitty; pull up the blind!
You say, "The sun will spoil the carpet."
Never mind, never mind.

Far better so than that your cheeks or mine
Should lose their worth or color, Kitty,
Let it shine, let it shine.

And you shall find new joy it will impart.
Pull up the blind, Kitty; pull it up!
The sun helps the heart.

—"Pipes of Corn."

Purifying the Blood.

That impurity of blood, says a writer in the *Phrenological Journal*, is the cause of most of our ill-health is well understood by nearly every one; and as evidence of this, we are confronted at almost every step with so-called "medicinal preparations" for cleansing the purple tide of life, and thus restoring the waning powers of the system. So common is the idea that the thousand and one proprietary compounds possess the mysterious power of removing impurities from the circulation, that vast fortunes are amassed in the manufacture and sale of them. From the standpoint of the hygienist the widespread belief in the efficacy of these remedies has no foundation in fact, and the money so freely expended for them is worse than wasted.

The only way that we can remedy the consequences of an imperfect and feeble action of the blood-making organs, is to add to the vitality of the system, and thus give to the weakened organs the power of proper functional work; while we promote the highest activity of the organs of excretion, that as speedily as possible they may remove the useless impurities. The only way to avert the effects of morbid and poisonous materials which shall find their way into the circulation, is to give the eliminative organs the best possible facilities for removing the harmful agencies; while we increase the vital power that shall withstand the attack of evil.

We must learn that we cannot by any means at our disposal take from Nature's hands the work of blood-making; or, with our crude devices, improve upon her handiwork. Proper food in proper quantities, pure air and correct habits of breathing, plenty of healthful and vigorous exercise, a clean skin and a clean conscience—these will do more to purify the blood than all the drugs of the pharmacy. We must build up, not tear down; increase the vital forces, not weaken or destroy them; supply good, wholesome, unstimulating food; not drugs or liquors and tobacco. In short, we must always work through Nature, not over or against her.

The Advantage of a Clean Skin.

The functions of the skin, says a writer in *Sanitarian*, are too important to be ignored. When we consider how large a share of the fluids and solids that enter the body should find their exit by this great emunctory, together with broken cells, morbid waste, and disintegrated tissue, all of which by obstruction of this organ is thrown back to poison the whole man physically, mentally and morally, we have at once the key to much of the misery that afflicts our race.

Suppose, for instance, the conduits that drain our city and remove the waste from its dwellings are obstructed, how long could the occupants remain in the most palatial mansions. They would have to abandon their homes, or be confronted with disease and death. Every person with an obstructed skin is in similar jeopardy, and the obstruction must be removed, or he must retire from the house he lives in. Perspiration is the safety-valve of the heart, and the sewer of the excretions; and hot-air and its accessories, properly applied, are not only the best protection against disease, but they are among the most efficient means of prolonging life, and of protection against unnatural and untimely death; and in the same proportion that we build with intelligence sanitary structures, and employ them, we may dispense with hospitals and invalids; and in the same ratio we shall prolong useful lives.

SANITARY SCIENCE.—Mrs. Hobart writes to the *Inter-Ocean* as follows: "The wise mechanic, although impatiently anxious to perform quick work and achieve results speedily, will yet take time to put all machinery to be used in perfect order, knowing that the single drop of oil, promptly applied to prevent friction, is a much more economic expenditure than hours of time and an incalculable amount of patience to mend the machine after it is once broken. Many social scientists begin to realize that, better than legislation, prohibitory or penal, better than reformation and repentance, and all of those expensive pounds of cure, is the old-fashioned ounce of prevention. Give us well-ordered homes, universal sanitary knowledge, and cleanly children, and we believe crime as well as suffering will rapidly decrease. Not until we have facts in regard to the number of children starved, abused, or poisoned into crime by poor food, bad management and foul air, can we estimate the importance of sanitary science."

DOMESTIC ECONOMY.

Curing Hams.

A reader recently asked for information concerning preserving pork. The following, from Dr. Pollard's writings on the hog, gives points on curing hams. As a general rule, there is too much smoking. This is more necessary in the large meat, as it serves to dry the meat off, and the creosote engendered by the smoking process is antiseptic and preservative. Meat when smoked too much retains this smoked, disagreeable taste. In England and France smoking is not used at all, and this is an evidence it is smoked too much here, or more than necessary. The Hanover County hams are famously good, and the best of them I ever saw were smoked only four times. An important matter is that the animal heat should be out before salting, and this may be accomplished in the same day if the hogs are killed by "day-break" and the weather is tolerably cold. We have frequently seen hogs killed very early and salted late in the same day; and this is our practice, unless the weather is warm. Many modes have been adopted for curing hams, and after repeated trials we think there is none better than the following: For twelve moderate sized hams, take twelve pounds of salt, one pound of salt-peter, and enough of molasses to rub them together, producing the consistency of damp brown sugar. Rub this in well, lay the hams separate on boards, with the skin side down. Repeat the application every week for four weeks. Then hang up and smoke on damp days with hard wood chips, if procurable; not to be smoked more than four or five times. Towards the last of February enclose the hams in canvas, painted, or what answers as well in our experience, large paper bags, securing well around the hock. This keeps out skippers and other insects. Immediately before doing this, rub some black pepper on the meat. If this plan is accurately followed, we will insure first-rate hams.

GUAVA JELLY.—T. C. L. sends the *Florida Agriculturist* the following recipe for guava jelly: "Cut the guava in five or six slices, do not peel them, put in the preserve kettle, cover well with water, and boil until quite soft, then strain off, and to each measure of juice, put one of sugar, (good dry sugar the best) return the whole to the kettle and boil until it jellies, and if you add the juice of three or four limes or lemons it will jelly more readily, juice to be added at the second boiling. The above is the recipe my wife uses for making jelly, and usually succeeds finely. One important item is the sugar, the finer and drier the sugar the better.

LEMON CUSTARDS.—One large lemon; one quart of new milk; quarter of a pound of white sugar, and seven eggs. Grate off the rind of the lemon; put it with the sugar in the milk, and boil quarter of an hour; strain, and let it remain till cool; then stir in the eggs, well beaten and strained, leaving out three whites; pour it into cups with half a teaspoonful of fresh butter, melted, in each cup; set them in water, and bake in a moderate oven; color them when done, by holding a hot salamander over, and serve cold, with sugar sifted on the top.

BARLEY SOUP.—Three ounces of barley, one and a half ounces of stale bread crumbs, one ounce of butter, quarter of an ounce of chopped parsley, and half an ounce of salt. Wash, and steep the barley for twelve hours in half a pint of water, to which a piece of soda, the size of a pea, has been added; pour off the water that is not absorbed; add the bread crumbs, three quarts of boiling water, and the salt; boil slowly in a well-tinned covered pan for four or five hours, and add the parsley and butter about half an hour before the soup is ready to be served.

BREAD MUFFINS.—Take four slices of baker's bread, and cut off the crust. Lay them in a pan, and pour boiling water over them, only just sufficient to soak them well. Cover the vessel with a cloth, and when it has stood an hour draw off the water, and stir the soaked bread till the mass is quite smooth, then mix in two tablespoonfuls of sifted flour and half a pint of milk, and stir in, gradually, two well-beaten eggs. Butter some muffin rings, set them in a buttered bake-pan, and fill each two-thirds full. Bake brown, and send to the table hot.

SPINACH WITH EGGS.—Wash the spinach leaves in several waters, and keep in cold water until time to cook it. Then put in boiling water enough to cover it, and add a little salt. Cover the pan, and boil the spinach briskly until the leaves are tender; they will sink when done. Then press the water out, cut the spinach fine, put it in the pan, season with butter, and serve hot. Have the eggs ready poached, lay them on the spinach, and mix well with it. This is a delicious dish, and seasonable in the spring of the year.

CORN MEAL BREAKFAST CAKE.—For two baking tins take one and a half pints of coarsely ground corn meal. Add water nearly boiling, but not enough to wet quite all of the corn meal; add cold water, a little at a time, stirring thoroughly between whisks, until you have it so thin that it has a tendency to settle as you pour it into your pie tins. It should not be more than half an inch deep in the tins, and it should bake quickly in a hot oven.



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NEW ADVERTISEMENTS.

Pacific Nurseries, Frederick Ludemann, Prop'r, S. F.; J. Hutchinson's Nurseries, Oakland, Cal.; James J. H. Gregory's Nurseries, Marblehead, Mass.; Stockton Nurseries, W. B. West, Prop'r; Pianos and Organs, Dan'l F. Beatty, Washington, N. J.; Dairy Ranch for Lease and Poland-China Boars for Sale, John S. Ward, Colton, Cal.; The Home Knitter; Raspberry, Strawberry and Blackberry Plants, Etc., Wm. Parry, Chinnaminson, N. J.; Perfected Butter Color, Wells, Richardson & Co., Prop'rs, Burlington, Vt.; Microscopes, Etc., Wizard Manufacturing Co., N. Y.; Los Gatos Nurseries, San Jose, Cal.; S. Newhall, Prop'r; Treatise on Stock Breeding, D. Appleton & Co., N. Y.

The Week.

The fine weather has shown marked symptoms of dissolution during the last week, but has thus far recovered from each attack of cloud and wind and reassumed the smiling face. The temporary storms have been enough in many of the northern counties to call the farmer to his work, but the central and lower regions are still in possession of idle teams and rusty mold-boards. The situation is one of expectancy. A good general downpour is needed to give heart to holiday merrymaking, by bringing to all minds the assurance of a season of plenty. There is still time for [this manifestation, but none to lose if the gift is to be in for Christmas.

The city and country are still in contemplation of the rascality in teachers' certificates, to which we alluded last week. The evil has already shown itself to be more widespread and abominable than any one supposed, but the ceaseless investigations do not yet show how the fraud was enabled to assert itself. Teachers have been shown to have passed by purchased advantages, and some have confessed the wrong and disclosed the agents who have profited by the unholy traffic. Nothing will satisfy the people but a full exposition of the means and methods of the nefarious business and where lies the blame for betrayal of the State's trusts. It is a shocking wound to all our ideas of the integrity and honesty of our school system, but the probe must go to the bottom. The poison can thus be soonest eradicated. Reforms are necessary. Let them reach the root of the evil!

Capital for Irrigation.

It now lies with capitalists to determine whether the west side of the San Joaquin river shall have an irrigation system or not. The commission created by the Legislature of the State have executed their preliminary surveys and their reports show that there is abundant water at one end of the district in Tulare lake; sufficient slope to the territory to carry the water throughout its length and opportunity to discharge the surplus into a great water-way at the other end of the district. Physically the scheme is shown to be feasible, and the question now becomes one of finance. The realization of the long-cherished hope of the west side people rests with the owners of the money bags. During the week the commission has advertised that, according to law, they will receive sealed proposals for the bonds of the district, which they are authorized to issue. These sealed proposals are to be opened at Grayson on the 7th of January next. According to legislative enactment the bonds may be sold at not less than 90% of their face value, and they shall run for 20 years; the interest on the bonds shall be at the rate of 7% per annum. Where the bonds are sold on sealed proposals they may be disposed of as low as 90 cents on the dollar, but at private sale the commissioners can sell only at par value. The gross amount of bonds now offered for investment is \$2,000,000.

It will soon appear whether the money can be had for this important work or not. The security is the real and personal property situated within the district, and this is valued by the commissioners at about \$2,500,000 at the present low price on the land. The best argument of the prospect of the loan is derived from calm estimates of what the land will do when irrigated, and what will be its new valuation on the basis of increased production. There are facts enough brought forward every year to show that the west side needs but sufficient water to rival all the State in those growths for which it is especially adapted. These facts are derived from the experience of private irrigation enterprises. Concerning the practicability of irrigating the district and the results which have already followed irrigation, the commission write as follows: "The tract of land embraced in the district is remarkably well adapted for irrigation. The surface is generally even; the slope from the lake to Bonsall's creek is on an average one foot to the mile; and from the canal line to the San Joaquin river it inclines 6 to 40 feet per mile. It will require comparatively little labor to prepare the land to receive the water. Irrigation on the west side is not an experiment; it has been successfully carried on for years in the same locality by the San Joaquin and King's River canal company, and where the land is good and the water intelligently applied, the result is astonishing. Lands at Badger flat that, before the San Joaquin and King's River canal company's canal was built, would have been dear at \$5 per acre, are now considered cheap at \$30 per acre."

It is not often that a capitalist allows enthusiasm and the comfortable feeling of having done a good deed for the public, to interfere with the cool precision of his calculations, and we cannot expect that this project will proceed farther than the advertisement, unless these sharp-seeing individuals who have the money can see something more than public good in it. It may be that as affairs generally are getting down to a small figure basis, and large sums of money cannot be placed except at concessions in interest, capitalists may not think 7% interest in gold coin, assured for 20 years, an insignificant matter. In fact, the conditions of the loan seem quite favorable to the money-lender, who wishes to place his funds where they will give him little trouble but that of regularly pocketing the interest. We trust such persons may come forward quickly, and the work which has long been promised put in motion. The question of the advisability of bonding towns and counties for public improvement is one which has a negative side; but in this case the people have voted in favor of the scheme, and they are best judges of their own futures. Certain it is that as agriculture on the west side has been heretofore practiced, with reliance upon a very fickle rainfall, it has been a business of great hazard, and the prospect of success lies in a different order of things. Consequently we hope the work will go forward, and the results may prove the salvation of a large

district of fertile land, which lacks nothing but water to fill its owner's hands with labor's richest rewards. The question now is, who will aid in this work; who will buy the bonds? Let the men with large treasure lying in bank vaults come to the aid of the people in this matter, and let our exports hereafter show every summer the results of a good year on the San Joaquin.

Egyptian Corn.

EDITORS PRESS:—I have seen some notice of Egyptian corn in the Press. Please let us know more about it? Does the grain or seed grow on top like broom corn or sorghum? Will it grow where corn will, and will it make a profitable field crop?—W. C. MEYER, Ashland, Oregon.

The Press has had a good many articles on this subject during the last year, but as the grain has had a wide planting and therefore many readers are interested in it, we shall present a few general facts which may not be known to all readers. It is probable that no newly proposed grain ever gave such general satisfaction over such a wide extent of country. It has grown, during the last summer, from the shores of San Francisco bay, eastward across the State to the foothills of Tuolumne county. It has extended from Sonoma county (and perhaps further north) southward to San Diego county. The plant has shown various states of development according to its environment. For instance we have seen it near the bay heading out at two feet high, while in the warm region of Fresno county it reaches upward several times as high and is proportionally prolific both in size and number of heads.

To those readers who have never seen the grain growing, we may say that it bears a striking resemblance to Indian corn in its foliage. In its fruiting it follows the sorghum method, throwing out its panicle of blossom at the end of the stalk, thus occupying the place of the "tassels" in Indian corn. The spikelets of the head are closely clustered together and bear both pistillate and staminate flowers adjacent to each other. Consequently the seed sets at the top of the stem like sorghum and not as in Indian corn. As the heads increase in weight the top of the stalk bends, and the heads when ripening bend downward and seem a dense mass of roundish seeds, which easily "shell out."

We are not sure that Egyptian corn or Dhoura corn will succeed in all Indian corn regions. At the East it is reported to develop perfectly as far north as Pennsylvania; Indian corn extends this limit. It must be tried in new locations to test its adaptations. This we know, that some years ago when the plant was agitated at the East, there were so many unsatisfactory results in regions not adapted to its growth that Dhoura corn came to be regarded in some parts as a current humbug. In this State, as we have said, there is a marked difference in its growth in different parts, and in some it will doubtless fall into disfavor. Concerning its profitability as a field crop, where it will grow well, there can be no doubt. It has the reputation among writers in the south of Europe of producing more bushels of seed to the acre than any known cereal. The correspondents of the Press have recited experiences which shows that the grain is excellent for chicken and hog feed, the stalks cut green are splendid forage for stock, and the grain, especially the white variety, when ground into meal is excellent for mush, pancakes and other kitchen manufactures. A point on its value as forage lies in the fact that its stems and leaves remain green and succulent, when Indian corn planted at the same time is ripe and dry.

In his excellent report on the grasses and cereals of Tennessee, Hon. J. B. Killebrew, State Commissioner of Agriculture, gives the following analysis to show the comparative value of dhoura, leaves and stalks, and red clover, as fodder:

GREEN FODDER.	Water.	Organic matter.	Ash.	Albumen-coda.	Carbolydrate.	Crude fiber.	Fat.
Clover.....	78.0	20.3	1.7	3.7	8.6	8.0	.08
Dhoura.....	77.0	21.4	1.1	2.9	11.9	6.7	1.4

This shows that dhoura fodder has more heating properties and more fat-producing principles than red clover, but is not so rich in flesh formers. This furnishes *prima facie* evidence in favor of dhoura as green feed, especially for hogs and for other animals, when fat is more desired than muscular strength.

QUERIES AND REPLIES.

Cork-Oak Trees.

EDITORS PRESS:—I have sent by mail a package of four dozen cork-oak acorns, which grew on trees I planted 17 or 18 years ago. I gave a short description of the trees in the RURAL in June, two years ago, I think. The trees are growing finely, but I keep them trimmed up to prevent them from shading orange trees. I have only a small amount of seed, but could sell seed by the sack if I had them, because there is much inquiry for it. I would like to have you give Prof. Hilgard some of these, as I have not many to spare or to sell at any price this season. I find it takes the acorns two years to mature from the blossom. I would like to see a grove of the trees growing in this State. They are an evergreen and a fine looking tree, and there is no better wood grows for toughness. I find the seed comes up fully as well where they have dropped off and got covered up as wild oaks do. I have one or two dozen two-year-old trees looking well. If freight was not so high I would send you a section of the bark. I peeled one tree last year and the whole section was over 20 feet long, and I cut it into about three-foot sections. I have some of them for running flowers or hanging baskets, only they are set in the ground. The other tree I shall strip next season.—C. G. HUTCHINSON, San Gabriel, Los Angeles Co., Cal.

These notes on the growth of the cork-oak in this State are very interesting. We should like also to know what other readers have done with the tree, for we have heard of its being in growth in several counties. The cork oak is one of the trees which the Commissioner of Agriculture at Washington is taking steps to disseminate. We send a good part of the acorns to Prof. Hilgard, so that the tree will soon have footing at the University, if it has not already been introduced there.

Stump Killing—Guavas—Carob Seeds.

EDITORS PRESS:—Will you or some of your readers answer the following questions: 1st. How can I kill a live-oak stump? 2d. Is there any commercial demand in San Francisco for the guava; or could a market be worked up? 3d. Is the tree known as the carob in Spain and Algiers, cultivated in California, and if so, where can the seeds be obtained?—CHARLES F. MEREDITH, Nordhoff, Cal.

We should like to have readers' experiences on the stump question. Concerning guavas, one of our leading fruit dealers, Mr. H. K. Cummings, thinks that guavas could be sold here. They are brought in sometimes from the Pacific islands, but the California grown article has not established itself in our city trade as yet. There would doubtless be some demand for the fruit. The carob tree is growing in this State. Seeds were distributed from this office a few years ago, and perhaps some one who has the seed will write to Mr. Meredith.

PREMIUMS FOR MERINO SHEEP AT THE STATE FAIR.—The list of premiums awarded for Merino sheep, at the late State fair, as printed in our issue of October 5th, was not explicit enough to show just the awards gained by each exhibitor. The following is furnished us as the complete and accurate list in the classes of sheep: Spanish Merino, best ram, two years old and over, 1st premium, J. H. Strobridge; same class, 2d premium, L. U. Shippee; best ram one year old and under two, 1st premium, L. U. Shippee; same class, 2d premium, L. U. Shippee; best three ram lambs, J. H. Strobridge; second best three ram lambs, L. U. Shippee; best pen five ewes two years old and over J. H. Strobridge; second best pen five ewes two years old and over, L. U. Shippee; best pen five ewes one year old and under two, J. H. Strobridge; second best pen one year old and under two, L. U. Shippee; best pen five ewe lambs, J. H. Strobridge; second best pen five ewe lambs, L. U. Shippee; best ram and five of his lambs, J. H. Strobridge; second best ram and five of his lambs, L. U. Shippee. Sweepstakes, best ram of any age, or breed and five of his lambs, "California Chief," 1st premium, \$75, J. H. Strobridge; second sweepstakes, ram and five of his lambs, "Dictator," French Merino, \$35, Mrs. R. Blacow. All other 1st premiums of French sheep awarded Mrs. Blacow, there being no competitors.

FREAKS OF A RAIN GAUGE.—We have heard of its "raining cats and dogs," but we never heard of such a shower as a Monterey correspondent tells of. He says a resident in Carmelo valley has a tin pot which he uses as a rain gauge. After the last rain he went out to measure the water and found a clothes brush and a bar of soap in the gauge. Even the Israelites in the wilderness never had such luxuries rained down upon them.

The new iron steamship *State of California* was successfully launched at Philadelphia, Dec. 5th.

The Bird of America.

The White-headed, but incorrectly called Bald Eagle, is well known to every one as the emblem of the United States. Many, however have false ideas of its real appearance and habits, obtained chiefly from unnatural figures and fictitious stories, so we have reproduced here the excellent illustration from life made for the "Ornithology of California," published by the Legislature in 1870, giving also a short account of its natural history from the most authentic sources.

The colors of old birds of both sexes are dark chocolate, or blackish brown, the feathers paler at edges, the head and tail pure white, bill and feet yellow. Length, 30 to 43 inches; extent of wings, 78 to 88 inches; wing, 20 to 26 inches; tail, 11 to 15½ inches; the female being considerably the largest (as in all birds of prey), and Pacific coast birds are larger than eastern or southern. The young in the first year is nearly uniform black, the feathers afterward growing out paler, and white near their base, every year becoming more white on head and tail, until the fourth year when these parts become entirely white. This change with age has led many to suppose that there were several kinds, especially as young birds often show white patches on the body.

Such a showy and noble-looking bird of course attracted the attention of the first European visitors to America, north of Mexico, where it is not known to exist. Its white head distinguished it from the very similar white-tailed eagle of Europe and Greenland, leading the celebrated Linnæus to adopt for its scientific name the Greek word for White-headed, which, combined with the generic title of the Fishing Eagles, makes that used by naturalists in all enlightened countries since 1760, namely, *Haliaeetus leucocephalus*.

About 1776 Congress adopted it as the emblem for our coins, and other national devices, against the advice of that practical philosopher, Franklin, who thought that a bird which lived in great part by robbing the industrious fish-hawk and killing defenceless lambs was unworthy of such an honor, advising that the honest and useful turkey should be adopted in its place, being also an American bird. This would have been, perhaps, as appropriate as the barnyard fowl of France, but the admirers of the Roman emblem, and the dignified aspect of the eagle, prevailed—though it has been recently supposed that the bird on coins may represent something quite different, almost anything between vulture and owl in fact, perhaps varying with the baseness or intrinsic value of the metal.

This bird inhabits the whole of North America, except Mexico and southward, where other kinds occur. It leaves only the extreme northern shores in winter, remaining wherever it can obtain fish from unfrozen waters, or small animals and birds near the forests. It is, however, a lazy bird, never diving for fish or pursuing game when it can find them dead or disabled, and therefore watching the fish-hawk and the hunters to share what it can capture with their aid. Its flight is heavy and slow compared with some birds of prey, which to some extent excuses it for "sponging" on others; but it has been seen at times to fly with great swiftness, capturing the flying fish in its short course over the waves, and certainly is swifter than the laborious fish-bawk. At times it is forced to dive for fish, circling round high in the air until it sees one near the surface, and then plunging like a bullet headlong to the water, though it does not go beneath it, but seizes the fish in its long, sharp claws. It also picks up dead ones and injured birds in the same way, while at times it varies its fare by hunting ground squirrels, etc., watching for them from the air or a tree.

The California Indians, and, to some degree, the Spanish population, held this bird sacred, and formerly it was a numerous species, allowed to live around the ranchos as a useful tenant, on account of killing many squirrels, though it might occasionally capture a weak lamb or pig. Instances have been published of infants being carried off by this eagle, but less often than by the fiercer and stronger golden eagle. Nowadays, as every schoolboy is allowed to carry a gun and shoot what he can, there is no danger of eagles becoming too plenty. Indeed, they are fast decreasing in numbers and will soon be rare in California.

The nests of this eagle were formerly very common here, built often in some tall sycamore and large enough to fill a two-horse wagon, being composed of large sticks, three or four feet long, piled together year after year, until the mass was five feet thick, having a little cavity at the top lined with a few clods of turf, moss, etc. In this are laid two to four eggs nearly equally rounded at both ends, whitish, rough, and from two and one-half to three inches long. They are laid from January to April, according to climate, the bird nesting from latitude 32° to latitude 68°.

Near the sea coast, where trees are absent, the nest is often built on a cliff, but pine trees are the usual kind selected northward.

The title of fishing eagles, given to this (and eight or nine other foreign kinds), merely shows



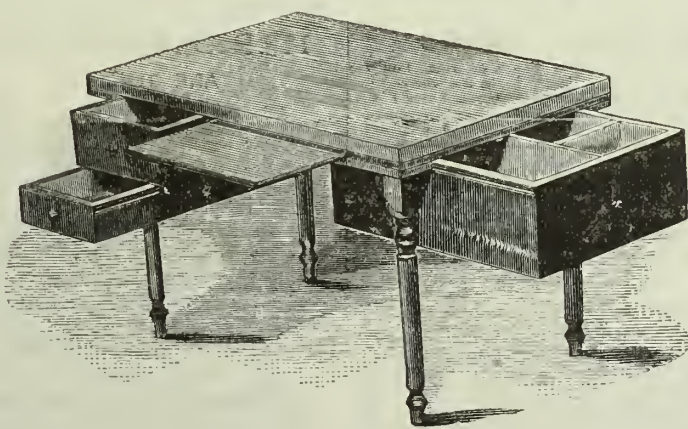
THE WHITE HEADED OR AMERICAN EAGLE.

its favorite food, and, indeed, it is rarely met with many miles from water, usually building its nest near its fishing resorts. In captivity it is dull and silent, except when hungry, then screaming and ruffling its feathers at sight of food in the most fierce manner. Young birds have often been raised from the nest, but are always dangerous pets, requiring a cage or chain, though they were formerly kept half-tamed about the ranches, going off to hunt in the morning and returning at night.

It is a singular fact that young birds of this species in dark plumage have longer quills and tail-feathers than those full-grown, making them measure larger than the latter. This is the reason why we sometimes read of enormous

U. S. Entomological Commission.

The United States Entomological Commission, attached to the United States Geological and Geographical Survey of the Territories, has issued its first report on the Rocky mountain locust, or destructive grasshopper of the West, a volume of some 700 pages, fully illustrated with maps, plates and wood-cuts. The favorable predictions made by the commission last winter had an encouraging effect, and stimulated the immigration to the country of late years ravaged by locusts. The statement which a full survey of the field enabled the commission to make in advance, viz., that there would be no serious injury in 1878, has been fully verified. The commissioners have continued their labors during the past summer,



STOCKTON'S IMPROVED KITCHEN TABLE.

"gray eagles," which are in the immature mottled plumage. One of these was doubtless the "Washington eagle," of Audubon, of which no second specimen has ever been seen by naturalists. The golden eagle is called sometimes gray eagle, especially old, faded birds, but may always be distinguished from this or any other true eagle of this country by having the legs feathered quite down to the toes. A larger kind of white-headed eagle, with pointed tail, inhabits Siberia.

THE NORTHER.—The north wind which prevailed on the bay on Wednesday was a general blow. A notice was posted in the Produce Exchange on Wednesday morning as follows: "The prevailing north wind extends throughout almost the entire length and breadth of the State, as reported by telegraph this morning at eight o'clock. It also extends north to Oregon, and eastward through Nevada to Salt Lake."

confining their attention to that northwestern portion of the country which they have designated as the "Permanent Region," the object being to gather further knowledge of that region, with a view of preventing the ravages of the Rocky mountain locust therein and its migration therefrom.

The problem of destroying the young insects as they hatch out in the more fertile country in the southeast is virtually solved in the report which the commission has already issued, and the task which they now undertake is to endeavor to prevent the migration of the winged insects from the permanent region into the more thickly settled country.

An appropriation of \$25,000 was asked of the

Stockton Kitchen Table.

This neat and extremely handy table was invented to supply a want long felt by housekeepers who are unfortunate enough to occupy rented houses of the mild class, which, as a rule, are woefully deficient in closet and kitchen conveniences.

Some articles now in the market for the same purpose possess points of merit in combination of parts, but have this great disadvantage, that when the drawers are open they interfere with each other, or render it impossible to approach the table to work without first closing them. Then there are sundry pans and dishes which are necessary to hold the material intended for use that must have room somewhere, rendering another table or shelf necessary, or else the alternative of opening and shutting the drawers as any of the materials therein are needed.

In the table shown in the cut the drawers can all remain open, and every article needed is in easy reach while working.

The pastry board being partially drawn out forms an extension of sufficient strength to admit of rolling out pie crust, etc., thus leaving the table top entirely clear to lay out a lot of pies or cakes ready for the oven.

Persons beginning housekeeping should examine these tables before completing their outfit, and those who have been worried with small closets will find in this a remedy they will be sure to appreciate. They may be examined at L. Lebenbaum & Co., Nos. 529 and 531 Kearny street, or a postal card may be sent to the inventor, E. A. Stockton, "Boss" Step Ladder Factory, corner Mission and Fremont streets, in this city.

The inventor has studied to produce an article which, while it equals the best in convenience, can be sold at extremely reasonable rates, thus placing it within the reach of the very class who most feel the need of such an article. By the loosening of a single screw it can be changed to bring the large meal bin at either the right or left hand end of the table, enabling the housekeeper to place it in the most convenient corner of the kitchen. The interests of the trade have also been considered, and the legs are detachable by removing a single nut, and two tables put into the space usually occupied by one.

Mr. Stockton is also the inventor of the "boss step-ladder," so well and favorably known on the Pacific coast. It is a marvel of lightness and strength combined, and no pains have been spared to make it what its name implies. The side supports are a novelty: Three rods being driven through holes bored near the ends of the steps, spread several inches apart in the middle, and joined in malleable iron sockets at the ends, forming a tri-part truss. The back legs, instead of having their braces nailed on the outside to be knocked off with the first rough usage, are in two parts, with the bracing and cross bars between them, and nailed through from both sides, the end being held by iron bands.

The side braces are wrought iron, arranged to keep the ladder from "walking together" while in use, and to throw the back legs into position by a motion of the thumbs while standing in front of the ladder. These excellent step-ladders are made under the inventor's personal supervision at the "Boss" Step-Ladder Co.'s Factory, and country buyers will find the general agency for the Pacific coast at Geo. W. Clark's, 645 Market street, two doors above the Palace hotel. These and other valuable patents have been obtained by Mr. Stockton through the MINING AND SCIENTIFIC PRESS Patent Agency.

CARRYING HONEY IN CARS.—We read that it is the conclusion of large receivers of comb honey in New York that honey stowed in a car with the flat side of the comb towards the locomotive, would break in nine cases out of ten. But if the edge of the comb was set towards the locomotive, the comb would hold to the side of the box and the honey could be carried across the continent without injury. The leverage of the shock of the sudden stoppage and starting of the cars is much greater on the broad side of the comb than on its narrow edge.

ON FILE.—"Apiary," R. W.; "Nuts and Fruits in Ventura," R. L.; "Progress in Fruit Growing," H. W. H.; "Bees and Honey," L. W.; "Old Fort Miller, etc.," J. W. A. W.; "Santa Barbara Notes," B. W. C.; "Yield of Lentils," I. W. A.

THE OYSTERMEN transplanted, in all, some 300,000 oysters in Benicia waters. They are in prime condition now, and about 26 boxes, containing 300 oysters each, are being shipped daily to market.

Lands for Sale and to Let.

LOMPOC
Temperance Colony.
45,654 49-100 ACRES.
Cheap and Desirable Homes.

TERMS OF SALE: 25% cash, and the remainder in eight equal annual installments with interest at 10% per annum, or full payment and Deed immediately.

Rich Soil and Healthful Climate.
Located in the Western part of Santa Barbara County, California, embracing 10,000 acres of the Finest Bean Land in the State; as high as 3,700 lbs. of Beans to the acre have been raised the present year, while 3,000 lbs. to the acre is not an uncommon yield.

DAILY MAIL
And Telegraphic Communication with all parts of the State. The Telegraph Stage Co.'s Coaches now run daily, each way, directly through the town of
LOMPOC.
E. H. HEACOCK, President.
IRVING P. HENNING, Secretary.
November 6th, 1878.

California Land Agency.
NO. 276 FIRST STREET,
San Jose, Cal.

Has on hand and is in constant receipt of Maps and Charts of
Public Lands for Location.

For from \$25 to \$50 I will select and survey for you a good claim, giving full details of its quality and adaptability to different kinds of agriculture or stock raising. I locate Pre-emptions,

Soldier or Sailor's Homesteads,
TIMBER, WOOD OR DESERT LANDS,
And have also numerous
Tracts of Cheap Lands For Sale.
For further particulars apply as above to
C. C. RODGERS,
Land Agent and Surveyor.

CHOICE
Farms and Orchards
In Santa Clara County.

212 Acres, 2 miles west of Santa Clara, considered one of the best Farms in the County, at \$90 per acre.
41 Acres, 30 acres in Almonds and English Walnuts, part in bearing, at Los Gatos, 1 mile from R. R. depot; no frost; Price, \$5,000.
1,040 Acres, in Santa Ana Valley, 6 miles east of Hollister; is one of the best farms in San Benito County; Price, \$30,000.
164 Acres, 8 miles S. W. of San Jose, rolling hills, all fenced, small orchard, running water; very cheap, \$5,000.
2,650 Acres, stock ranch, 20 miles south from San Jose; good pasture, plenty wood and water; \$18,000.
832 Acres, 22 miles from San Jose; stock ranch; \$5,000.
160 Acres, in the warm belt, 1 1/2 miles above Alma, on R. R.; Price, \$3,000.
337 Acres, 3 miles from San Jose, at \$70 per acre; No. 1 farm.
73 1/2 Acres, 5 miles from San Jose; house, barn, etc.; at \$55 per acre.
191 Acres, 4 miles from San Jose; choice farm, at \$90 per acre.
Several fruit orchards in vicinity of San Jose, from 3 to 20 acres, on easy terms. Also, improved places in San Jose and Santa Clara. Title good in all cases, or no sale.

JAMES A. CLAYTON, Real Estate Agent,
288 Santa Clara St., San Jose, Cal.

FARM FOR SALE.
\$4,000.—Two Hundred Acres of
Land in Mendocino County.

Thirty miles from the county seat, and 20 miles from the Coast, one of the healthiest localities in the State, especially for consumptives. The place is fenced off in six different fields. Plenty of water and timber for all purposes. A good orchard. Vegetables of all kinds grow well. A good dwelling with six rooms, ceiling and painted inside, good frame barn, granary, storehouse, smokehouse, etc.
Also, Six Hundred acres of grazing land, well fenced, three miles from the above farm, plenty of water and timber for all purposes. Price, \$2,250.
For further particulars, address "B. T.," care of DEWEY & CO., PACIFIC RURAL PRESS office, San Francisco, Cal.

A Good Dairy Ranch For Sale
On Bear River, Humboldt County, Cal., containing 600 acres of as good grazing land as any in the State. New Dairy and Dwelling House. The land is well watered, and plenty of timber for firewood and shelter, and well fenced. I will also sell with the ranch 100 head of choice dairy cows and five horses. Price, \$13,000, one-half down, the remainder on easy terms for one, two or three years. Apply either in person or by letter to RICHARD JOHNSTON, Post-office address, Myrtle Grove, Humboldt County, Cal., or to R. J. JOHNSTON, No. 1,324 Howard Street, San Francisco.

BEE RANCH FOR SALE.
One of the best ranges in the State. At present working 375 stands Italian Bees. Apply for particulars to
D. W. McLEOD,
Riverside

60 Chromo, perfumed, Snowflake & Lace cards, name on all 10c. Game Authors, 15c. Lyman & Co., Cliftonville, Ct.

BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 323 Front street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

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WILLIAM NILES, Los Angeles, Cal. Importers and Breeders of Thoroughbred Poultry. Eggs for hatching.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

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BURBANK & MEYERS, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Dogs, etc. Eggs for hatching. Send for price list.

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ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

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DEVOTED TO
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POULTRY.
Unlimited Range.
Healthy Stock.
Largest Yards on the Coast.
Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.
Safe arrival of Fowls and Eggs Guaranteed.
Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents.
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EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

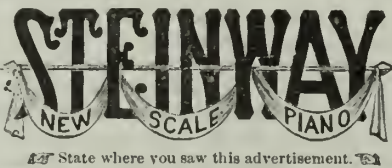
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John Norgrove,
Manufacturer, Importer and Dealer in
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At prices to suit the times. Repairing promptly done.
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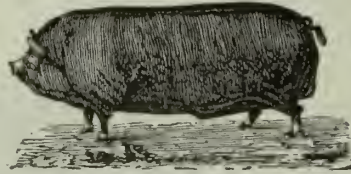
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Breeder and Importer of the "Crown Prince," "Sambo," and "Bob Lee" families of Berkshires. Also, pure Suffolk hogs and pigs. Short Horn and Jersey, or Alderney cattle. Merino and Cotswold sheep. Prices always reasonable. All animals sold are guaranteed as represented and pedigreed.

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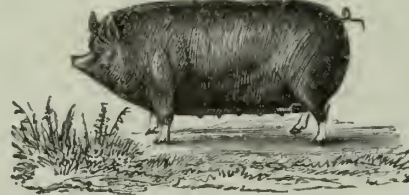
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SAN FRANCISCO CAL.

Authorized Capital - \$2,500,000,
In 25,000 Shares of \$100 each.
Capital Paid up in Gold Coin, \$405,000.

OFFICERS:
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MANAGER AND CASHIER,
ALBERT MONTEPELLIER.
SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

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Incorporated February 10th, 1875.

Capital Stock, - - \$1,000,000.

OFFICERS AND DIRECTORS.—DANIEL INMAN, President; I. C. STEELE, Vice President, AMOS ADAMS, Secretary; JOHN LEWELLING, Treasurer. DIRECTORS—W. G. COLBY, W. L. OVERHISER, A. D. LOGAN, R. S. CLAY, A. T. HATCH, O. HUBBELL, THOS. FLINT.

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106 Davis Street, San Francisco.

Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

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Farmers' Union, San Jose.

C. T. SETTLE.....PRESIDENT.
H. E. HILL.....MANAGER.
W. M. GINTY.....CASHIER.
Authorized Capital - - - \$200,000.00
Paid up in Gold Coin - - - 95,000.00
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Will do a General Mercantile Business, also, receive Deposits, on which such interest will be allowed as may be agreed upon. Gold, Silver and Currency exchanged. Will also, on commission, make purchases and sales (at home and abroad) at low rates.

FARMERS AND OTHER CITIZENS are invited to examine our constantly large and varied stock of first-class goods, including Tea, Coffee, Groceries, Provisions, Crockery, Hardware, Farming Implements, Wagons, Barbed Fence Wire, Household Goods, etc.

All of our patrons can depend upon low cash prices and square deal in reliable articles.

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A CARD
To Grangers and Farmers.

The undersigned is now prepared to receive and sell

HAY, GRAIN, HORSES and CATTLE,

That may be consigned to him, at the HIGHEST MARKET RATES, and will open a trade direct with the consumer

Without the Intervention of Middlemen.

He also asks consumers of Hay and Grain and Stock Buyers to co-operate with him, and thus have but one commission between producer and buyer. Address

S. H. DEPUY,
Nos. 11 & 13 Bluzome St., San Francisco.

Grangers' Co-operative Business Ass'n
Of Sacramento Valley.

Location: K & 10th Sts., Sacramento, Cal

Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are cash on delivery. Goods shipped; marked C. O. D. W. H. HEAVENER, Manager.

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CHEAP PORK.

The Brazilian Artichoke.

Is the cheapest and best food for Hogs, being ahead of anything in existence for that purpose. 600 to 1,000 bushels to the acre. Little trouble. No harvesting. No feeding. The Hogs will help themselves if allowed to do so. I have a limited quantity of seed to sell. Send for Circular giving full information to
J. H. F. GOFF,
San Felipe, Santa Clara County, Cal

A FEW DEVONS AND GRADES
FOR SALE.

Address R. McENESPIE, Chico, California

Fall and Winter Trade.

The history of trade, commerce and general produce is largely made up in its varied interest drawn from the products of the soil according to value and worth. Thus home production is the ideal of agricultural progress in whatever sphere its limits of trade and outgrowth is drawn within the jurisdiction of State or Territory, to the greatest good and number of mankind in general. Mercantile pursuits vary in the vernal routine of business circles, and is guided principally by the action and movements of change in season, bringing forth their specialty of trade in market for seed time and harvest.

The application of the foregoing may be applicable to one of the leading branches of agriculture, as dealers in seeds, fruits and general produce, embracing the house of Messrs. W. R. Strong & Co., Nos. 6, 8 and 10 J street, Sacramento. The house has issued a new catalogue for 1879, containing departments of flower and vegetable seeds. Flowering bulbs and roots, ornamental climbers, everlasting flowers, ornamental grasses, seeds for green-houses, and lawn grasses, as to variety, purity, quality and perfection of growth they are not to be excelled. Seeds, bulbs and plants are mailed in large quantities with perfect safety and success, free of postage, to all parts of the United States.

In dealing with specialties, as flowers, fruits, bulbs and seeds, a word or thought might be spoken here on the adaptation, growth and maturing qualities of each within their own sphere or circle. This has been a subject of deep study, which cannot be reached at short notice. Time and opportunity should be given, which some have taken years to develop by studying its varieties as to soil, climate and peculiarity of the nature and its surroundings. An instance might be drawn as to the raising of peas, where there is only one county in the State adapted, which is Humboldt, on the borders of Oregon. Here is found the soil, climate, moisture and state of atmosphere to ripen and perfect their growth, equal to any point ever found. The seeds grow and develop uniformly, not subject to weevils, but each seed remains perfect, true to nature, and yields an abundant harvest, which might be named for future reference: *Extra Early*, Daniel O'Rourke, Tom Thumb, Little Gem, *Early*, Advance, Queen of Dwarfs, Eugenie, Dwarf Champion and Yorkshire Hero. *General Crop*—Champion of England, Blue Imperial, White Marrowfat and Black-eyed Marrowfat.

Various minds have written on the adaptation of fruit, small, large, semi-tropical and varieties, which is still a topic to be further developed and ideas gained by practical applications as time and its capabilities will allow. Within the past few years the subject has greatly developed itself throughout the length and breadth of the land. Many varieties of new and choice fruits are being brought forward, and still on trial, which will be noted and in time be a part of history for future reference.

Flowers and bulbs have their space, which cast an influence among homes of city and rural retreats. Although our land is made up of golden colors, varied in extent in magnitude, height and depth, each have their own specialties in the sphere they belong. Californians as a rule live among their own fruit and vine cultured portals, enjoying the freshness of the crisp fruit amid the sweet scented bulbs and flowers, or viewing the surrounding lawn of ornamental grasses beneath their feet.

Under the head of fall trade may be mentioned dried fruit. The house has a large assortment of fine sliced apples, put up in good style in boxes of 40 pounds each, three grades, by the Walter process, from J. W. Violett, Lone City. Here is another specialty which within a few years the number has been increasing and are found within the lower valleys and mountain heights. Our mountain fruit is showing a higher standard in grade each year, and may receive a higher premium over other fruits grown in the State, i. e., special varieties. The peach may be mentioned as being well adapted in that locality as to size, flavor, growth and other points peculiar to its variety. The apple is also a favorite in that locality, still fine specimens are found in counties of the middle and lower portions of the State.

The home productive qualities of the raisin is beginning to cut a figure in our market board, and entering as an article for fall trade. The wide scope of our fertile State within each extremity shows well an adaptation to its culture. Thus while each section calls forth its specialty in maturing and perfecting the same, the high economy must rest while till further progress is developed, and a narrower line drawn to distinguish its quality, flavor and size. To gain that point, each must learn something of the culture of the grape, the perfecting and attainments acquired. Thus the culturist who develops and matures the vine, studies the principal and chemical affinities of the soil, applying those ingredients that will enhance its growth and constitute the par excellence of a perfect grape. The second and last attainment is the crowning point to arrive, i. e., to make a *model raisin* equal in every respect to foreign importation. This work is progressing. The study of science is applied—various ideas plans and specifications in way of driers are being multiplied. Ingenious processes prepared to manipulate the grape previous to entering the drier, are culminating. Thus while each are bringing everything to a specific point, the finger of time will point to the world to what degree California's richest soil will stand in the perfection and art of raisin culture.

Honey is another specialty, which some pay their entire attention to as a business. As we have spoken of peas from the northern border, so we may place the honey interest to the extreme or southern border. So too between the two points at intervals other specialties, as nuts, shrubs, ornamental trees, grasses, semi-tropical fruits, etc., are finding their place and situation peculiar to growth and flavor.

Fruits, vegetables, flowers and grasses are interesting studies to the thoughtful, and it is gratifying to see through our agricultural press so many minds writing, studying and sending letters of inquiry through its columns seeking information on these subjects so beneficial to the growth and development of our fertile soil.

Geo. Rich.

Sacramento, Cal.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, December 11th, 1878.

Trade is still quiet. As it draws near the holidays all seem to be waiting for the turn of the year, and whatever business is done will be in the light lines, which have their harvest at Christmas time. Produce generally is quiet, with few fluctuations, which will be noted under proper headings. Abroad the situation in Wheat does not yet improve, although better rates are expected in the near future. The cable has shaded down a little, as will be seen by the following:

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday...	9s	7d	0s	9d	9s	8d	0s	1d
Friday...	9s	6d	0s	9d	9s	8d	0s	1d
Saturday...	9s	6d	0s	9d	9s	8d	0s	1d
Sunday...	9s	6d	0s	9d	9s	8d	0s	1d
Monday...	9s	6d	0s	9d	9s	8d	0s	1d
Tuesday...	9s	6d	0s	9d	9s	8d	0s	1d
Wednesday...	9s	6d	0s	9d	9s	8d	0s	1d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1876...	10s	10d	11s	1d	11s	10d	11s	3d
1877...	12s	7d	12s	11d	12s	9d	13s	3d
1878...	9s	4d	9s	9d	9s	7d	10s	—

The Foreign Review.

LONDON, December 10.—The *Mark Lane Express* says: Increased supplies at the provincial markets indicate anxiety on the part of farmers to market their wheat, in consequence of the serious agricultural depression. This is regrettable, although doubtless unavoidable, as there are strong signs that prices during the next few months will take an upward turn. The fact is, the trade has become, to a great extent, demoralized by large supplies of foreign produce, and especially by the rapid increase of the supply in America; but, on the other hand, the exporting power of India is enormously reduced, and that of Egypt absolutely nil, while shipments from Russia are practically at an end for the season.

Freights and Charters.

The *Call* says that the freight market continues stagnant, and rates nominal on the basis of 37s 6d for iron vessels to Cork.

Eastern Grain Markets.

CHICAGO, December 7.—The Grain market is settling down a trifle, and closing prices do not differ materially from Monday's. They are, however, a little lower. The little flurry consequent upon the arrival of Mr. Keene subsided quickly, leaving the market in a state of weak uncertainty as to the future. Receipts have not been quite so large as before the raid, but have kept up well. Spring Wheat for January delivery sold at 83c; Rye, 14c; throughout cash; Barley, 9c; Oats, 7c. Provisions have declined moderately from their already very much depressed prices, aided in the drop by the strike at the stock yards, where the accumulating stock naturally compelled holders of swine to moderate their views. Pork for January sold at \$7.50; Lard for January, 50c; Beef for January, 40c. These are the lowest prices known in this market since it was established.

Eastern Wool Markets.

BOSTON, December 7.—The Wool market is dull, with no indications of immediate improvement. Leading manufacturers are bearing down prices, evidently with an intention of stocking up with sufficient Wool to bridge over until the new crop again makes its appearance. A number of cheap lots have been bought up in neighboring markets, and these sales are quoted to influence prices here; but as yet they have failed to convince leading holders that the market is not already low enough. Holders are still free sellers at current rates, but sales can only be forced at a concession, which most holders are unwilling to make. Sales include Eastern Oregon, 22c. In California Wool, sales of the week include 27s, 000 lbs Fall and Spring at 10c 25c, of which more than one-half good Spring Wool sold at 25c.

Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day, as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Nov. 20.	WEEK. Nov. 27.	WEEK. Dec. 4.	WEEK. Dec. 11.
Flour, quarter sacks...	127,964	47,503	50,274	41,700
Wheat, centals...	144,304	72,993	203,674	114,456
Barley, centals...	21,632	16,088	21,252	22,347
Beans, sacks...	12,567	4,705	7,510	6,347
Corn, centals...	6,925	7,955	6,734	18,104
Oats, centals...	23,014	9,976	11,284	12,710
Potatoes, sacks...	24,552	20,466	14,234	16,269
Onions, sacks...	771	1,229	854	715
Wool, hales...	1,341	606	940	476
Hops, bales...	684	281	110	55
Hay, hales...	752	1,180	1,185	1,564

BAGS.—The nominal rate is still 9c 9d for standard Grain Bags. Sales are, of course, for speculation or future use, and they are few. The bids which speculators made last week of 8c are now sold were not accepted. Purchases are reported of 1,500,000 Grain Bags, to arrive in May and June, at 9c.

BARLEY.—The general range is not changed. We note sales: 800 sks good coast Chevalier at \$1.30; 500, 300 and 640 good Feed at \$1; 700 Bay do, at \$1.15; 1,000 good coast at 97c; 1,250 light do, at 95; 1,000 sks good coast at 97c, and 200 good coast at \$1.02 1/2 c.

BEANS.—Peas and small White Beans are selling better. Limas shade down from the point reached by the first arrivals. To-day's prices will be found below: Sales of 226 sks Small White at \$2.65; 96 do Pink, \$1.90.

CORN.—Prices are about as last week. We note sales: 50 sks small Yellow at \$1.00 1/2, 214 do at \$1.05, 448 at \$1.02 1/2 for large and \$1.05 for small Yellow, 105 small White at \$1.15 Egyptian at \$1.75 sks large at \$1.02 1/2, and 3,000 cts do at \$1.05, half silver.

DAIRY PRODUCE.—The Butter market is in better condition, although prices are as yet unchanged. Fresh roll sells as fast as received, and is firm. The stock of pickled roll is well reduced, and there is little or no good firkin Butter. Dealers report the market in better shape than it has been for a long time. Cheese is unchanged.

EGGS.—Eggs are still 35c 37c with a better feeling, which sometimes sends a choice lot to 40c.

FEED.—Hay is abundant and demand light. We note sales: Cargo fair Coast Hay, \$9; 10 tons fair Stable, \$10; choice Wheat is reported scarce. Ground Feeds are unchanged.

FRESH MEAT.—There is no change from last week's prices. Fresh Beef is now arriving by refrigerator car from Reno and Cheyenne, and reported quick of sale. The butchers' combination to force retailers not to buy this meat seems to have expired.

FRUIT.—Apples are still low, and large receipts from Oregon hold them so. It would seem as though some of these shipments would hardly pay expenses. Other fruits are not materially changed except bananas, which have advanced to \$5 per bunch for the best. In Grapes the market is led by some fine black Conechon, which sell at \$1.75 per box.

HOPS.—The market is still altogether unsatisfactory, and sales are only for local use. We note sales of 80 bales of Washington Territory at 73c per lb. The New York market reports no new features.

LIVE STOCK.—Trade has been rather slow. We hear of sales of 1,000 Sheep and Lambs, Wool on, at \$1.75 gold.

OATS.—Oats are quiet. We note sales of good Coast Feed at \$1.30.

ONIONS.—All good Onions now range from \$3.25 to \$3.75. Salt Lake Onions range from \$2.75 to \$3.

POTATOES.—Our list shows an advance in all kinds now in the market.

POULTRY AND GAME.—Hens have sold a little better. Turkeys are down again. It is too soon for them to put on holiday figures.

PROVISIONS.—There are no changes in prices. VEGETABLES.—Green Peas, Marrowfat Squash and Tomatoes have advanced. Other Vegetables on our list have not changed.

WHEAT.—The Wheat market has shaded off again, and \$1.75 is now the top price for Shipping. We note sales: 1,000 cts fair Shipping at \$1.70; 3,200 do, at \$1.71 1/2; 1,400 good do, at \$1.72 1/2; 1,000 cts fair Milling (at Vallejo) at \$1.65; 1,000 do off grade at \$1.50; 800 poor coast at \$1.35, and 10,000 good Shipping at \$1.71 1/2 per cwt.

WOOL.—Our quotations are lowered a little to meet the poor classes of Wool which now alone remain from the season's clip. We note sales of 70,000 lbs these descriptions at 9c 12c.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., December 11, 1878.

BEANS & PEAS.		Almonds, db shd lb		Soft shd lb	
Barley, cts...	2.50	Almonds, db shd lb	7	Soft shd lb	14
Butter, cts...	2.50	Brazil...	12 1/2	Pecans...	12 1/2
Peas...	2.50	Pecans...	12 1/2	Almonds...	14
Red...	1.75	Almonds...	14	Filberts...	15
Sm. White...	1.75	Filberts...	15		
Sm. White...	2.40				
Lima...	3.75				
Field Peas...	1.00				

BROOM CORN.		Almonds, db shd lb		Soft shd lb	
Southern...	2	Almonds, db shd lb	7	Soft shd lb	14
Northern...	3	Brazil...	12 1/2	Pecans...	12 1/2
		Pecans...	12 1/2	Almonds...	14
		Almonds...	14	Filberts...	15
		Filberts...	15		

CALIFORNIA.		Almonds, db shd lb		Soft shd lb	
California...	4	Almonds, db shd lb	7	Soft shd lb	14
German...	6	Brazil...	12 1/2	Pecans...	12 1/2
		Pecans...	12 1/2	Almonds...	14
		Almonds...	14	Filberts...	15
		Filberts...	15		

DAIRY PRODUCE, ETC.		Almonds, db shd lb		Soft shd lb	
Cal. Fresh Roll...	30	Almonds, db shd lb	7	Soft shd lb	14
Fancy Brands...	32 1/2	Brazil...	12 1/2	Pecans...	12 1/2
Pickled Roll...	24	Pecans...	12 1/2	Almonds...	14
Firkin...	21	Almonds...	14	Filberts...	15
Western...	12 1/2	Filberts...	15		
New York...	27 1/2				

EGGS.		Almonds, db shd lb		Soft shd lb	
Cal. fresh, doz...	35	Almonds, db shd lb	7	Soft shd lb	14
Ducks...	25	Brazil...	12 1/2	Pecans...	12 1/2
Oregon...	30	Pecans...	12 1/2	Almonds...	14
Eastern...	18	Almonds...	14	Filberts...	15
By express...	27 1/2	Filberts...	15		
Pickled livers...	25				

FEED.		Almonds, db shd lb		Soft shd lb	
Barley, ton...	—	Almonds, db shd lb	7	Soft shd lb	14
Corn Meal...	25	Brazil...	12 1/2	Pecans...	12 1/2
Hay...	7	Pecans...	12 1/2	Almonds...	14
Middlings...	22	Almonds...	14	Filberts...	15
Old Oat Meal...	34	Filberts...	15		
Straw, hales...	40				

FLOUR.		Almonds, db shd lb		Soft shd lb	
Extra, hbl...	5	Almonds, db shd lb	7	Soft shd lb	14
Superfine...	4	Brazil...	12 1/2	Pecans...	12 1/2
Graham, hbl...	2 1/2	Pecans...	12 1/2	Almonds...	14
		Almonds...	14	Filberts...	15
		Filberts...	15		

FRESH MEAT.		Almonds, db shd lb		Soft shd lb	
Beef, 1st quality, lb	4 1/2	Almonds, db shd lb	7	Soft shd lb	14
Second...	4 1/4	Brazil...	12 1/2	Pecans...	12 1/2
Third...	3 1/2	Pecans...	12 1/2	Almonds...	14
Mutton...	3	Almonds...	14	Filberts...	15
Spring Lamb...	5	Filberts...	15		
Pork, undressed...	5 1/2				
Dressed...	5 1/4				

HONEY, ETC.		Almonds, db shd lb		Soft shd lb	
Recsax, lb...	30	Almonds, db shd lb	7	Soft shd lb	14
Honey in comb...	11 1/2	Brazil...	12 1/2	Pecans...	12 1/2
do No. 2...	8	Pecans...	12 1/2	Almonds...	14
Dark...	8	Almonds...	14	Filberts...	15
Strained...	4	Filberts...	15		

HOPS.		Almonds, db shd lb		Soft shd lb	
Oregon...	—	Almonds, db shd lb	7	Soft shd lb	14
California...	8	Brazil...	12 1/2	Pecans...	12 1/2
Wash. Ter...	8	Pecans...	12 1/2	Almonds...	14
Old Hops...	3	Almonds...	14	Filberts...	15
		Filberts...	15		

NITS Jobbing.		Almonds, db shd lb		Soft shd lb	
Walnuts, Cal...	4	Almonds, db shd lb	7	Soft shd lb	14
do Chile...	6 1/2	Brazil...	12 1/2	Pecans...	12 1/2
		Pecans...	12 1/2	Almonds...	14
		Almonds...	14	Filberts...	15
		Filberts...	15		

TALLOW.		Almonds, db shd lb		Soft shd lb	
Crude, lb...	7	Almonds, db shd lb	7	Soft shd lb	14
Refined...	9	Brazil...	12 1/2	Pecans...	12 1/2
		Pecans...	12 1/2	Almonds...	14
		Almonds...	14	Filberts...	15
		Filberts...	15		

Wool.		Almonds, db shd lb		Soft shd lb	
Sau Joaquin, free...	9	Almonds, db shd lb	7	Soft shd lb	14
South'n Coast, do...	9	Brazil...	12 1/2	Pecans...	12 1/2
Sac. and Northern...	11	Pecans...	12 1/2	Almonds...	14
Mendocino & Humboldt...	16	Almonds...	14	Filberts...	15
Southern, heavy...	8	Filberts...	15		
Northern...	11				
Oregon, Eastern...	16				
do, Valley...	21				

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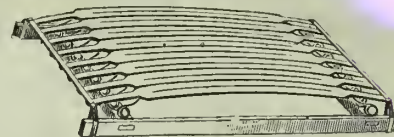
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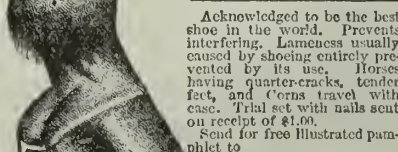
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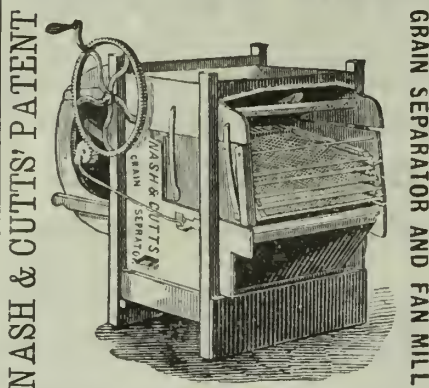
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with favorable facilities for transportation, favor the com-
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zens of this early settled, appropriately termed "Garden City."

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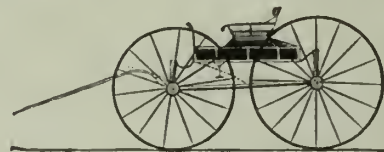
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Blacksmithing of all kinds Neatly
and Promptly done.

Horseshoeing a Specialty.

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FINCH'S CURE ALL—Warranted to cure all sores, old
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I hereby certify that I have sold Finch's Cure All in Michi-
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healing all manner of sores on man or beast I have ever sold.
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1st. -Owing to its being plaited (not twisted) it is stronger than any other Wire made. All other Wires, and especially close twisted Wires, are weakened; IF MUST BE SO, because the fiber of the metal is broken in twisting.
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ROSES, FUCHIAS, PINKS, ETC., ETC.,
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PACIFIC RURAL PRESS

Volume XVI.]

SAN FRANCISCO, SATURDAY, DECEMBER 21, 1878.

Number 25.

DOUBLE SHEET—24 PAGES.

Christmas and the Children.

Before another RURAL issues from the press the Christmas melodies will have passed away upon the air and thoughts will dwell upon the new year's advent. It is timely then that at this time we should tender to all our readers a cordial wish that their's may be a "Merry Christmas"—joyful during its continuance and sweet to remember when it is gone. May there come to each such innocent pleasure as each shall most enjoy; and may the influences of the day refresh and strengthen earnest hearts for the duties which the recurring days shall bring.

Christmas is the children's day. Years ago it was the day of the grandest Child ever born into the world—the Child of Bethlehem. Now after the lapse of the centuries the day becomes the day of all the children; gift of the childrens best friend. To those who are advanced in years, there will come unbidden Christmas thoughts, memories of early lessons impressed by Christmas ceremonies and of the words and deeds of those who find their own joy in making their children happy. This being the case, we leave our older readers to guide their own thoughts on Christmas day, and give our force of illustrations to the children. Upon this page may be seen a bright-eyed, chubby little friend of yours, who peeps at you through a framework of holly branches, and wishes you "A Merry Christmas." She has her hood well tied about her ears, to shut out the chilly wind which even in genial California sometimes kisses the cheeks and nips the noses of little ones who go abroad for Christmas evergreens. We mistrust that the little girl shown in the picture is a rosy little English maiden, and the branches she holds are of the historic English holly; but for present purpose, you may regard her a little Californian, and weave about her face a wreath of California holly. Do not her eyes dance with delight as she has "caught you" with a Christmas wish before you could recover from your surprise at her sudden appearance. You may keep this little girl for a friend of yours if you wish, and often bring her out to show you what a bright sunny creature a little girl should be. If you like you can spend a pleasant hour in giving her picture a coat of water-colors, and if nicely done, the pretty face will look all the brighter if the holly leaves be changed to a rich green and the berries tinged with a bright red.

These are but a few of the sports which good children may have on Christmas day. All homes will be filled with the spirit of joy, and all parents hearts will glow with a love than which none on earth is warmer or purer. See to it young friends, that your own little hearts are full of right feelings and your minds with good thoughts. Be obedient, be generous to all, and do not forget to give of your abundance to your little friends whose homes may not be filled with things to make children happy. Ask your parents to tell you of the Divine Child whose birthday brings you so much joy, and whose example you should follow in all your

thoughts and deeds. Then you will indeed have a "Merry Christmas."

THE FLAT PEACH OF CHINA.—We had a moment's conversation the other day with Mrs. C. A. Longstreet, of Los Angeles, concerning the "peen-to," or flat peach of China, introduced to this State about four years ago by the late Mr. Longstreet. We had reference to this fruit

stands transportation well. Its size may be compared with Hale's Early, as when the pits were removed from both peaches the flat peach was heavier. The pit is very small, and thus it gained a point on weight in the comparison made. Its shape is rather flat; so that the fruit packs like a row of saucers. The tree is very healthy, having had no curl leaf when other varieties were affected. This peach has

Northern Oranges and Lemons.

EDITORS PRESS:—By this day's express send you a few oranges and a lemon grown on our place. You can see for yourself how they compare with the Los Angeles as to ripeness. They are budded from a good Los Angeles or San Gabriel orange; the lemon is "Sicily."—C. M. SILVA & SON, Newcastle, Cal.

The fruit is very handsome. The oranges are of good size for marketing, their circumference, being seven inches horizontally, by 10 inches vertically. The skin is bright, clean and thin, and the seeds few, and flavor excellent. The fruit retains all the characteristics of the best Los Angeles orange, and as they are now generally ready for the market, they can be brought in ahead of the southern fruit as the growers claim. As we lately stated, this difference in time of ripening is one of the most hopeful indications which has yet appeared in favor of the general spread of orange culture over the State. Dr. Joseph M. Frey writes from Newcastle, Placer county, to the *Chronicle* to confirm the statement that "oranges ripen a month earlier in the foothills than at Los Angeles," and he states that they exceed in flavor and richness any which he once picked from the trees in the royal gardens at Rio Janciro. He is located on the top of a hill 1,000 feet above the level of the sea. He had great difficulty in clearing off the boulders at the outset, but is now flourishing, having bananas growing finely, and being able, always, to place in the San Francisco market the first raspberries of the season. Owing to the dryness of the atmosphere his place is seldom visited by frost.

The lemon sent us by Messrs. Silva & Son is a very handsome specimen, having the true "Sicily" features, thin skin, devoid of bitter taste, and very few seeds. In this connection, we may mention that Mr. Cantelow, of Solano county, brought us in handsome specimens of the California lemon which he is now selling in this market, and which has marked superiority over the common California lemon as it comes to this city. It has, however, objectionable points in excrescences which give thickness to skin, etc. Mr. Cantelow has also the "Sicily" lemon trees growing, but not yet fruited. His experience thus far he counts valuable, in that in his locality there is a freedom from frost, and the lemon tree grows beautifully, although not far distant on either side the frosts are heavy and destructive. With this advantage of locality he will pursue the subject of lemon growing and will secure the best varieties. When his "Sicily" comes in fruit, we think he will find it superior to that he is now gathering.

In our "Agricultural Notes" this week may be found interesting paragraphs concerning the growth of oranges in Butte, Colusa and Napa counties.

SHEEP husbandry in western Texas has grown at a marvelous rate. In 1866 San Antonio received but 600,000 pounds of wool, while in 1877 she received 2,000,000. In 1866 there were shipped from Corpus Christi, 600,000; this year there will be shipped 6,500,000.



"A MERRY CHRISTMAS TO YOU."

a few months ago, from specimens sent by mail to Mr. Trumbull. These specimens did not fitly represent the fruit, as we are now assured. It seems likely that the flat peach will come into the contest for the place of the "earliest peach." On Mrs. Longstreet's ranch it ripened earlier than Brigg's Red May, Beatrice, Alexander and Amsden, thus outstripping all the coterie of early peaches commonly grown. The fruit is light yellow when ripe, with a bright pink blush on one cheek. The flesh is greenish, tinged with pink. The fruit has very solid flesh, and

excited quite an interest in Los Angeles, and numbers of the trees are being put in by orchard planters, some substituting the flat for other varieties. We should like to have this peach tried in some of our northern early peach districts. If it does as well generally as it has done on Mrs. Longstreet's place, there may be the money in it which pertains to the earliest peaches to come into the market.

THERE is much sickness among the British troops in Afghanistan, principally pneumonia.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Santa Barbara County.

EDITORS PRESS:—Although the farming land seems small in extent immediately adjoining the city of Santa Barbara, there are, nevertheless, scores of small suburban farm residences, and as you pass on to Goleta the width of arable lands increases and for the whole distance of about 8 miles, which is traversed by two roads, good farms are on every side of you. And off to the right, for miles up among the hills, are valuable homes with mountain ranges for stock, and finely-sheltered fruit lands; that is, land with proper soil altitude, moisture, and sufficiently shielded from winds to insure success in a great variety of fruits.

The large buildings off to the right of the avenue, having a deserted farm appearance, I was told belong to the Sisters of Charity, and the rental proceeds go to support their charities.

Goleta

Is a neat little village in the midst of the choicest of small farms on every side, and that run back far into the foothills, making a surrounding community ample to support a first-class store and the ordinary village shops (except the dram-shop). A small church edifice and good schoolhouse and hall are all they claim as public buildings. Their school of high first-grade shows the appreciation the community places on home culture; where the many enjoy academic advantages, instead of sending off a few to a distant school, and then employing only a low-grade teacher at home.

The most interesting place in this vicinity is the

Santa Barbara Nursery,

Belonging to Joseph Sexton. His manner of showing up what he has there is very pleasant. He simply tells you what variety of peach he is selecting from the tree, and leaves you to judge of its quality for yourself as you eat it, and the various other varieties. Without any boast or egotism, he gives you information of the commercial value of his orchard products. His success as a nurseryman, as to growth of trees and qualities of varied fruits, is amply shown on his grounds; and also his high taste in decorative plants. His experiments with the pampas grass, coloring it in varied shades and sending it to the East, is proving a decided success.

There are some very productive small farms in this vicinity, producing equal to almost any acreage in the State, especially of beans; the exact figures are not at hand at present, and the personal names worthy of mention would be too many for this writing.

Passing along a few miles, brings you to a beautiful, highly decorated gateway entrance to the home-residence of Colonel Hollister, who has spared no pains to show a cultivated taste all along the winding avenue of over a mile in length that conducts you to his family mansion. Had the Colonel been at home, he could have shown many interesting experiments, no doubt, that he is making in stock and farm culture. But what one is obliged to notice in riding through his place would more than fill a letter.

Back of him, in the hills, is the large estate of Mr. S. P. Stow, which in many respects might claim to be the model place for elegance of grounds, gardens, buildings and varied appointments, showing what a highly cultivated taste and ample means can do, especially where nature has first excelled herself in spreading out the richest of grand scenery for man to occupy and utilize. The county is proud of all these model places. Not so much as evidences of wealth, as the proof indisputable that the retiring business man may quickly erect a home, and surround it with a greater variety of ornamental loveliness than would be possible with much greater outlay near any of the suburb cities of San Francisco.

Space would forbid my making any mention of the magnificent distances to be passed over, as one journeys along the coast of Santa Barbara county—not thickly settled, and in many places not especially inviting—too much hill and mountain coming too close to the sea, but on ahead we behold long lines of the eucalyptus and some dense groves, we know that is Elwood Cooper's ranch. We infer that these groves and lines of trees were grown without irrigation, and that what his wealth has proved on a large scale, some poor small farmer can do on a small scale with equal success. Mr. Cooper is one of the enterprising citizens, owning a large portion of the stock of Santa Barbara college, and for a time presided over the institution.

The coast mostly seems quite barren, compared with the lands that lie back among the hills, watered by little spring streams. Some of these valleys have room for a few families to settle and make nice little homes, with stock ranges back in the hills beyond the water supply. While settlers here rejoice in a vast range for cattle, they long for better society advantages, and for the first begin fully to realize that enlightened civilization can only be sustained in fully organized society; and that their best efforts will fail to keep up to a standard when isolated from neighbors.

In getting from the beach to Lompoc, three miles of most romantic canyon road with palisade rocks severed, seemingly, expressly to make a road-way, leads you to the small Spanish settlement Las Cruces, consisting of saloon, a few residences and an American hotel. Nearly

the entire 24 miles from here to Lompoc is an excellent road, on the lands of Diblee & Hollister, they preferring to keep the road in repairs, rather than to have their lands thrown open to a public highway. There are portions of this domain that could now be purchased for colony purposes, at moderate rates. The ranch is used for sheep and cattle mostly, and employing very few laborers. Passing from this little ranch of leagues, you suddenly are ushered to the Lompoc valley.

The first that greets your friendly notice is a field of genuine buckwheat, cut and bunched; and adjoining it, beans that were being harvested. On gaining a full entrance to the valley you find the infant colony now spread over the entire valley, and engaged in varied farming, and striving hard to amend the shortcoming of the dry year by extra exertions this year. With the exception of wheat, they were generally well rewarded, barley and corn very good, but the most profitable yield is beans, 20 acres measured, yielded 22 tons of beans weighed, to Mr. Jesse Hill, and near him a smaller number of acres, yielded near two tons per acre. Lompoc for a young settlement has accomplished much in advancement toward a success, if not such already. The valley, extending say 12 miles by 2 to 5 in width, is nicely surrounded by low hills, with a small sand ridge fencing it off from the ocean. Dense willows and weeds occupy yet some portion of the valley. The amount of settlement may be gathered by the fact that three schools districts are occupying four teachers, in schoolhouses that have already cost \$8,000, though the main one is not nearly completed.

The town of Lompoc is not large, four or five stores, three hotels, restaurant, and a full assortment of shops, with the exception of a grog shop. For this lack the ladies take most of the blame, as report has it they got unconstitutional, and publicly held an over-flow meeting in the would-be drunkard factory, and flowed the liquor vile over the floor. Since then it has been respected as a real temperance colony. There are evidently a few of the later arrived who long to see the wishes of nine-tenths of the community set aside, and a full-fledged vice mill established. Their argument is that some now send off and get a bottle of demijohn full, and the money has left the camp, when if the liquor was already there, then the money would simply remain there. Sensible ones say the argument is too thin; for, whereas now, but small amount is thus sent out, by the other tenfold more liquor would be sent for and consumed.

The mercantile business of Lompoc is in the hands of those who desire the true prosperity of the colony, their interests are alike on this point. I am asked if the people of Lompoc seem to be contented and happy? Perhaps as few discontents as is to be found in almost any community, that is endeavoring to carve out a home in a new and entirely unimproved portion of a sparsely settled country. They have had their share of discouraging trials to go through, but now rejoice in abundance of farm products, with comfortable houses, and established society that will do to compare with older settlements. Church, school, literary and charitable associations, all in running order, as in older communities.

The Land Company

From whom they purchased their places, observing the severity of the hard seasons, made a very large remittance on the price they were to pay for the land, amounting in all to near \$150,000, which was very gratefully accepted. The present outlook seemed quite favorable that most of the colonists will soon own good little homes. Some of them will value them much, because to make them they have toiled late and early. There is yet more land in the valley about equal to any yet taken, and the company aim to deal liberally with those who seek a home with them.

Extra Mail Favors.

They now have the coast line of daily stages running through, giving daily mail, express, etc. Instead of any discouraging features predominating, they have many points of success that excite their pride and ambition. Their very able local paper, *Lompoc Record*, has done much to build up the community, and establish a feeling of permanence.

In common with the other coast settlements, they feel the lack of more convenient and cheaper shipping facilities. They have a rich deep soil, and are fast learning what is the most profitable crops to cultivate. Wheat not a success this year, except in a few instances. The flouring mill was making flour from wheat of the colony.

The valley is so very healthy that the drug store and physician's business must run quite light.

The exit out from the valley to

Los Almos Valley

Is over a sandy road and quite a high hill, and but little of interest, as you can travel about 15 miles without any houses close to the road. Los Almos is in the midst of some pretty good farm lands, and now aspires to be a village, and in addition to stores and shops has also built a steam flouring mill, so great was the prospect of a large yield of wheat this year. The good valleys are not large, and the best are owned as grants mostly. The larger portions of all the lands in this vicinity are hilly and well adapted to sheep and cattle raising. But the drought of last year leaves them almost unoccupied, and abundance of feed to dry on the ground. Off to the north, eight miles, circling around some

hills you come into the nice little settlement of Oakdale.

It was formerly known by some Spanish name signifying Big Cat canyon, but when their school district required a name, Oakdale became legalized. There is excellent grain and grazing lands here, the highest hills yielding good crops of oat hay this year. Corn, melons, and several of the fruits seemed to be doing well, for the amount expended in that line. Viewed at the close of the harvest season it seemed to be quite as certain for mixed farming as the more extensive valley lands. The adjoining canyons and small valleys are all settling with nice little families. B. W. C.

Cost of Artesian Wells.

EDITORS PRESS:—Some of the most deeply interested amongst the many readers of your valuable information about artesian wells, may probably feel a laudable curiosity to know something of the probable cost of boring, etc.

I beg to convey a seemingly practical estimate I received a few days since.

If such prices are, as they profess to be, cheap, I fear flowing wells are likely to remain a luxury slightly above the reach of small or struggling farmers—a serious loss to California: 50 feet, \$250; 150 feet, \$900; 250 feet, \$1,600; 350 feet, \$2,400; 450 feet, \$3,300; 550 feet, \$4,300. Including galvanized 11-inch inside pipe and block iron, 13-inch outside pipe to clay bed.

N. B. Hard rock, extra.

DRYASDUST.

["Dryasdust" writes from a place within a few hours travel of San Francisco, by rail or water. The prices should not be much above city rates, especially if the borings are made by local well-borers. A San Francisco contractor, says that he would bore the 50-foot well, and drive pipes of the above materials and dimensions (provided he had no rock to drill through) for \$4 per foot. For each increase in depth of 50 feet, he would charge at the rate of 50 cents more per foot. The wells above enumerated would cost respectively, \$200, \$675, \$1,250, \$1,925, \$2,700 and \$3,575. These are San Francisco prices. The contractor would charge more if he left the city. But, as hinted above, a local well-borer would not have the same excuse for doing so. The New City Hall well is 180 feet deep, the pipes are 14-inch black, and 12-inch galvanized. The well itself, will cost the city only about \$700. We have the contract figures of some other wells that have been bored here. A well 140 feet deep, outer pipe 10 inches, inner, 8 inches, \$3 per foot. An 8-inch well, 110 feet deep, \$3 per foot. A well about 170 feet deep, 12-inch pipe outside, 10-inch inside, \$7.50 per foot. Well 174 feet deep, with pipes same as preceding, \$8 per foot. Another well, the depth of which we do not certainly know, but think it was in the neighborhood of 160 feet, pipes 7-inch and 6-inch respectively, was contracted for at the rate of \$1.70 per foot. By referring to the PRESS of Nov. 9th, the cost of pipe may be ascertained.

There are well-borers and well-borers. And, as we have suggested on a previous occasion, the best thing for those wishing wells to do, is to club together, buy their own apparatus and material and bore for themselves.—Eds.]

Yield of Lentils in Mendocino County.

EDITORS PRESS:—I have been a reader of your valuable paper since its first publication, and a subscriber part of the time, and have always been interested as well as instructed in its perusal. I have been especially pleased with articles relating to the large amount of produce that has been raised on small pieces of ground in different parts of this State, as in my judgment small farms are what make a country prosperous. As I have never seen any such article from this beautiful valley I thought I would relate a little of my experience. When in San Francisco, three years ago, I saw at the door of a seed store what to me was a very strange looking pea. I took one and brought it home. In the spring of 1877 I planted it, and awaited the result with much interest. Early in August the peas were all ripe, and I picked from the one vine 420 beautiful peas, which weighed six and one-half ounces. I sent two East to a friend and two to R. J. Trumbull & Co., of San Francisco, to ascertain the name, and was informed that they were called the Russian lentil. I planted last spring 416 peas, the result of last year's crop (less the four peas), on a piece of ground 22x60 feet, or exactly one thirty-third of an acre, planting one pea in a place, in rows two feet apart, and most of the peas 18 inches apart in the row. I found afterwards that even this was too thick, as the vines matted together and caused many of them to mildew. I think three feet each way on rich soil is near enough; however I raised 103 pounds of perfectly clean lentils, without the sign of a bug, or at the rate of 3,399 pounds to the acre. Some of the lentils were trod into the ground while harvesting, these came up soon after our first rain, and some of the plants are over a foot in diameter, and are growing nicely in spite of very heavy frosts and nights cold enough to freeze milk in the house as thick as window glass.

As a green pea for table use, we find them nearly as good as the dwarf marrowfat, but require more cooking; they are also excellent after being dried, and when sufficiently cooked

are reduced to a perfect pulp. I am fully satisfied that they are a valuable crop to raise to fatten hogs, especially in this valley or in any other place where the crows are so destructive to the corn when ripening, as well as where on account of the shortness of the season, corn often fails to fully mature. Mr. Hallett, one of your agents, was here last summer and saw my patch of lentils while growing, and said he should like to hear the result of the crop, and feeling confident that their worth is not generally known, and not even fully appreciated by many who have raised them, I have penned this article.

IRA W. ADAMS.
Round Valley Indian Reservation, Mendocino Co., Cal.

THE APIARY.

Bees and Honey.

EDITORS PRESS:—Mr. R. W. Kenny, in his article on honey production, etc., in the PRESS of October 26th, says all beemen have a right to their own opinion, and we would not quarrel upon the subject, as we are all liable to mistakes.

He says a beeman has to be with his bees 150 days at the least. Now the question arises: What does he have to do in that 150 days? For my part I cannot see. We have in our apiary 250 stands, and it does not take one man one-fourth of the time Mr. Kenny allotted for the care of 100 stands. The only real attention needed is in the spring, in swarming time, in the months of April and May. Then it is necessary to select nice large swarms to fill up the vacant hives, from which bees have died out during the winter. That will require from 15 to 20 days, then there is nothing more to do until time for taking up the honey, and that is about two hours in the morning of each day for about two months.

I find that bees, that hive themselves, do better than the majority of those we have ourselves. Persons first starting an apiary with a few stands will find it quite an advantage to have empty hives set around through the beeyard, several swarms that hived themselves this last season filled their sections the second time. Our sections when filled average from 36 to 40 pounds.

The question is asked, how can honey come down lower than the blackest "West India Molasses." There are several answers to the question. First, people do not, or have not learned the uses that honey can be put to. Candy made from the poorest quality, and used for coughs and colds, has no equal, and is not bad to take.

Two years ago I used honey for preserving, and it proved a perfect success, and prefer it to sugar. Any person who has ever preserved peaches in California, knows that it is almost impossible to keep them from fermenting, unless put up air-tight. I used the cling peach, whole, and did not seal them up. I was simply experimenting. They kept perfectly sweet and nice until the last ones were used.

Mr. Kenny says honey made near the coast is all dark, or not good color. Again I think he is mistaken, our honey this year as well as last year is white and clear; and we have actually been accused by people who did not know good honey when they saw it, that it was adulterated. Communications from our agents in San Francisco, say that for purity and quality our honey has no equal in the San Francisco market. To be sure our crop of honey is only a drop in the bucket, our average shipments per season are from three and one-half to four tons to San Francisco, besides what we supply our home market. We have not received less than six cents for any sold this year, and some sold for ten cents. It may be that the price of honey, like almost everything else, is controlled by speculators, and it may sometimes be the fault of commission merchants, if they take the price of the honey for their commission.

Regarding the over-crowding, he is correct. An apiary can be over-crowded as well as a ranch over-stocked, but a great many beemen don't think so. They have the one idea, the more stands the more honey. I hope to hear from Mr. Kenny again upon the subject.

MRS. S. WRIGHT.

Monterey, Cal.

Granulated Honey.

EDITORS PRESS:—All good honey will grain in the course of time, but there is a great difference in it. Keep honey in a wooden vessel and it will granulate sooner than in glass or tin. Then there is a difference in the honey and the time of year it is gathered and the plants it is gathered from. Water-cress honey granulates quicker than that from any plant we have and some years it yields the most. I have extracted 24 pounds at night that was gathered the same day. I did it two or three days in succession, and it would grain before I could get it to market. The color is good, but there is a peppery taste when first extracted, which disappears with age.

Early spring honey or common bloom gathered from our thousand different kinds of flowers granulates very readily, and, as the season advances, the honey gets whiter and keeps its liquid state longer. Last spring the cold late

rains kept the bees at home most of the time, and some of the weak ones nearly starved, for at that time of year they are supposed to have a large amount of brood and consequently feed a great deal of the early honey, although some seasons they can spare a good deal. In 1876, we extracted about 60 pounds per colony before the sage began to bloom. It was very good honey though a little colored. It sold at eight cents and had begun to grain somewhat. The prospect now is, if we have rain this winter, the bees being strong and the most of them have so large a quantity of honey now, that they will have to be extracted early, especially where increase is desired, for with the combs full of honey the increase will be very slow. The honey that has been in the combs all winter will granulate in a short time after being extracted, but about one-half of the people who are consumers would like it better if they knew it was all right, but they think there is something wrong and will not take it at all, or if they do it is at a reduced figure.

Those that had rather have it in a liquid state can make it so in a little while. If the honey is in a glass jar first open the top, then set it in cold water in a kettle or tin pail, placing something under it in the water, so that it does not set tight on the bottom. Let the honey and water heat both at the same time and there is no danger of breaking the glass. If the honey is in a can, it can be set in hot water at once and thus save a little time.

When melted in this way honey will keep longer than it did in the beginning, or so it has proved with me. Now the manufactured article, put up in nice glass jars and labeled "white clover honey," stands in the stores year after year, and who ever saw any of it grained. I certainly never did, and I have seen a good deal of it in the East and know of its being on the shelves for five years before being sold. Granulation denotes purity, and what is called sage honey is very white, and I think nicer to put on the table, and it is certainly more handy to use. There is only one objection to it in that state, it does not go so far and a person who likes it will use a great deal more with less damage to clothes and table linen than when in the liquid state.

Analysis proves to us that honey is composed of two parts, grape sugar and acid. Now of course the honey gathered from different flowers must be composed differently, and the more acid the longer it will keep in the liquid state, where, on the other hand, that honey that granulates first has the most saccharine matter or sugar, consequently is the best and purest honey, and worth the most if consumers would once get over their prejudice and look into the matter a little.

R. W. KENNY.

Springville, Ventura Co., Cal.

PISCICULTURE.

Investigation into the Food Supplies of Trout.

The tenth annual report of the New York Fish Commissioners contains some valuable scientific investigations into the food supplies of trout. It appears from an abstract of the report which we read in the *Utica Herald*, that the Fish Commissioners authorized Profs. Lintner and Peck, the State entomologist and the State botanist, to make a thorough examination of the insects and plants growing in Caledonia creek, where the State hatching houses are located, and make a full report of the results. This creek has long been noted for the astonishing number of trout which have been taken from it, apparently without diminishing them as is usually the case in ordinary streams. It was found upon examination that the fauna and flora of this creek were also unusually abundant. The species of plants were not many in number, being only a water-cress, a chara and four mosses. But the quantity of each of these is large, and one of them, a rare moss, *Hypnum notrophilum*, or moisture-loving moss, which has not been found elsewhere in the State, and is known in only one or two other States of the Union, grows here in great profusion. Trout-food in the shape of animal life which inhabits the plants and the bottom of the creek, was found to be wonderfully abundant. A single bunch of moss brought up by the rake contained representatives of three classes of the animal kingdom, vertebrates, articulates and molluscs; and their number was so great as to astonish Prof. Lintner, who in all his experience had seen nothing equal to this. Such a revelation as this naturally suggested that there must be a relation between the great number of trout and the great quantity of trout-food existing in the creek. And, of course, if the plants and insects are to be furnished along with the fish for stocking streams, they must be raised and cultivated also. No difficulty is anticipated in doing this, except that each species of insect, or crustaceans or molluscs, must be kept by itself for breeding; and the two professors are now engaged in making experiments in this direction, which are expected soon to have practical results. Some streams are already furnished by nature with all that is necessary for the support of the fish. Others are barren, and can only be successfully stocked with fish by stocking also with food. Artificial ponds are often constructed, and these also will need to be planted with mosses and insects before stocking with fish.

HORTICULTURE.

Advice to Fruit Tree Buyers.

EDITORS PRESS:—"When a person buys nursery trees, how is he to know whether he is getting what he calls for or not?" said a friend to me the other day. This reminds me of the "tricks of nurserymen." But let me soften this expression a little before proceeding further, for fear honest nurserymen will think that I mean to slur the whole profession; which I certainly do not mean to do, for I am personally acquainted with several intelligent, reliable and honest nurserymen on this coast, both in California and Oregon; and saying this much for the honest ones, I hope they will pardon me for saying some things about the tricks of the dishonest ones.

I will quote from the catalogue of an honest nurseryman: "If varieties are ordered which we cannot furnish, others equally good will be substituted." Another one says: "Persons not acquainted with the different varieties of fruit, will do well to leave the selection to us." Now I believe both of these men from whom I have quoted to be capable and fair-dealing, and ordinarily it might do to trust to their judgment, if you had none of your own. But my advice is, to make up your mind, from some intelligent and reliable source, before you send for trees, about what kind of trees you want, and then say distinctly that you want none others. Now suppose you trust the selection of your trees to a man that is incapable or, which is a little worse, dishonest, what kind of an orchard would you be likely to have when it came into bearing? I think it would be a good deal like many of the old orchards that you find very common in Santa Cruz and Santa Clara counties, composed principally of worthless fruit, which was furnished by either ignorant or dishonest nurserymen, or "tree peddlers," who are nearly always frauds, unless sent as agents by reliable nurserymen, and can "show their papers." In order to show you how the confiding person may be "taken in," I will give you an incident near home. A neighbor made out a bill of trees for a peddler to fill, which consisted largely of yellow Newtown pippins (the best winter apple known), and when the trees came into bearing they were generally all some worthless summer sweet apples. This is only one out of scores of similar cases that I am acquainted with. I mention these facts for the benefit of confiding purchasers and reliable nurserymen.

I will now answer my friend's query, "how to obtain the kind of nursery trees that you want." First ascertain what kind of fruit is suited to your location; then select out of them such as will best suit your purpose. If you want a good market apple or pear, that will bear shipping and command a good price, and your location is suited to such fruit, make out a list and send or carry it to some reliable nurseryman; and don't buy of a peddler or even take his trees as a gift, for you are sure to be cheated at that. Do not buy of an agent, unless he can show, without doubt, that he is an agent of a well-established nursery, and is honest enough not to mix worthless trees with the good. Do not buy of nurserymen that cannot show a good reputation among his oldest customers—those that have fruited his trees and found them right. I look at this matter as of such importance that I would not take \$100 worth of trees as a gift unless I was satisfied that they were such as I wanted. The more I had of them the worse off I would be.

There is another consideration about this, and that is, that there are nurserymen of long standing that are not reliable; and I know some of them. Well, say you, "how are we to know who are reliable, then?" Just make inquiry among the man's customers and see how his trees have corresponded with his labels when they came into bearing. You will find that nine-tenths of the labels are lost before the trees bear, and that the purchaser has forgotten what it was, and many don't know whether they were cheated or not; and "slippery" nurserymen are aware of this fact.

A year or two ago there were some fellows going through this county offering all manner of fruit and ornamental trees for sale, which they said were from old, extensive and reliable nurseries of Ohio, and they said that they had a full variety of the choicest fruit that was grown anywhere, and could furnish you with anything you wanted at lower rates than you could get them from any of the California nurseries. They also said that they had many choice flowers that were not here. Well, they made a good many people believe all that, as unreasonable as it was, without any evidence beyond their bare word for it. Just think of it: a man going through the country with a wagon load of trees and offering to furnish any and all kinds that you want from his wagon, and that at a low figure. Take my word for it that all such men are frauds of the meanest type, for they will sell you worthless trees for you to spend money and time on for years, only to be disappointed with them when they come to bear fruit that you have no use for, and you have to graft them over or dig them up. I have given these timely hints in order that the uninitiated may be on their guard.

M. P. OWEN.

Soquel, Cal.

FLORICULTURE.

Care of Potted Plants.

EDITORS PRESS:—In an article on window potting plants, in your issue of October 20th, the writer states that amateurs fail in potting pod plants, for the reason that they expose their pots to the sun. The writer means to say that they must be plunged. This practice will do with plants put out doors in the summer. This we do to save watering. Even with us professional men it is very few plants in pots that we will plunge in winter, (if any.) It is a very ticklish thing. We take them out of the pots and plant them on benches in good soil, pulling off all the flowers we can in the winter, and throwing out the old plants in the spring. Your readers, or most of them, have heard of Mr. Peter Henderson, the most successful florist in the United States, no small word, but it is well known to be true. He has made more mistakes than any other man in the business, but, he had the sense to profit from his mistakes. He had one fall the finest lot of pot-grown roses I had ever seen set with buds. He had them by the thousand, and was offered \$3 a piece for them. They would average 100 flowers to the pot. He would plunge them in bops (he at that time believed in nothing but hops), and I will just say that Mr. Henderson never sold a bud of them. One by one dropped off, and should this meet his eye he will give me credit for a good memory, and wake up one of his follies.

How is it that the sun will not kill the roots of our plants in greenhouses, when they are not plunged. We expose them to a full southern sun, with never a burn, and certainly no amateur has as much as we have in greenhouses. The more general cause of the failure of our lady friends, is that they kill their plants or make them sick, as they do their lovers and husbands, by too much kindness. They pet them entirely too much. There is no man so tough as be that roughs it; strong, healthy and vigorous. The old saying is: "You can drive a horse to water, but you cannot make him drink." There are more plants killed by water than any other cause. Give it to them when they want it, which you can easily ascertain by asking them. You may laugh; at first the answer will be as intelligible to you, as Chinese to me, but you will soon understand it. Knock the side of your pot with the fore-finger of your right hand on its side. If the pot sounds like an empty one, your plant wants water, if it sounds with a thud it is wet or too wet. To post yourself in this, fill a pot with earth and wet it. Take an empty one and sound it, you will then see the difference. When you water, do it thoroughly, let it run through the ball until it comes out at the bottom. In newly potted plants they generally shrink from the sides, leaving a cavity between the ball of earth and the pot. Run your finger around on top of this to stop it up before watering. If this is not done the water will run between the ball and pot. In all and every case avoid keeping water in your pot saucers; after watering, empty out the water from the saucers. If you let the water stand in it, you rot the roots of your plant and the end is sure death. A better way of keeping them is to have a false bottom under your plant shelf, the shelf perforated with a few holes to drop into this false bottom of tin or galvanized iron. Have a small tube (one-fourth inch) running down the leg of your stand into a bucket. You then have no more trouble and you need not be afraid to have your plants on your finest Brussels carpet.

This watering with tepid water is too old foggy. It was exploded years, years ago, when I, as a youngster, went to learn the practical part of my business. Before we gave the water to a plant, we had to insert a thermometer in the water so as to have it the same temperature as the greenhouse. We now grow better plants by roughing them, than with all such kindness. We now attach a hose to city water and slash it all over them; rain water, lime water, anything we can get.

Give your plants, if flowering, all the light and air you can, and plenty of sun. Rest assured the pots will not burn the roots. Foliage plants should have no sun. This is the foundation, without such no house will stand.

I will give a way to grow sweet alyssum (white, rose-colored and yellow), also the candytuft of different colors, flowers of which are much larger, and the habit of the plant stronger and altogether preferable to sweet alyssum. There are eight different varieties of it, and they are about 12 inches high. They are pure white fragrant, crimson, lilac dwarf, dark purple, rocket, pure white. There are also mignonette and lobelias; the blue flowers of the latter make a nice contrast to the others, viz.: *L. Paxtonii*, *L. speciosa* (crystal palace compacta), *L. pacilis*. Use low in pots or saucers, as the seeds are fine, particularly the lobelias. Sprinkle the seed very thinly, an inch apart if you can. Cover with light soil (dust). After sowing press well the whole mass with the bottom of another pot or piece of board. Then water lightly; place in the shade or put a paper over them, as all seed germinates better in the dark. When breaking (in professional parlance) through the soil, give them plenty of light. As a general rule in all seeds never cover with earth deeper

than the depth of the seed. In fine seed we never cover it, simply pressing it into the ground. All of the above, when about one or two inches high, set them out in your permanent boxes or pots at least four inches square and six inches is all the better. If they remain where sown, thin them out to that distance apart. Then stop them, as we term it, which is simply to pinch out, with the finger or thumb, the top of the plant. This makes it and all plants bushy; it will make your plants look better, and double or treble your flowers in quantity and add to the size of them. The above planted in boxes in the center, and the lobelias, with their beautiful blue flowers, hanging in festoons down the sides and ends makes a handsome parlor or other room ornament. In my next I shall give you names of plants suitable for window gardening and their treatment.

G. HOWATT.

Diamond Springs, Cal.

[Mr. Howatt is a graduate of Royal Botanic Gardens, Kew, London. He has recently come to this State to take a responsible position with the California fruit-growing company. His favor above was early received, but has been unavoidably held back by us. We hope to hear from him in the future.—EDS. PRESS.]

Answers to Queries.

EDITORS PRESS:—Will such plants as the colons withstand the frosts? How is the anaryllis propagated; will it grow from seeds? Will the bulb of the tuberose bloom the second time, or is the bulb worthless after it has bloomed one season? Will the young bulb that grows from the main one this year bloom next season? How is the moss-rose propagated, will it grow from cuttings? If these questions are worth answering in your paper, please do so. I am now, and have been a subscriber for your paper for a number of years, and I read it a good deal and with satisfaction.—ENQUIRER, Williams, Colusa county.

EDITORS PRESS:—The colons will not endure any frost. It even ceases growth, and the leaves curl up when the nights grow cold, before the approach of an actual frost. Take cuttings of new wood, and root young plants in September or October. Then winter these in the house. The richly colored acbaranthus, and the amaranthuses, are a little hardier, but were killed nearly to the ground in this locality last week.

The amaryllis is propagated by natural increase of the bulb, which is sufficient in rich soil. Small bulbs forming against the larger one, if separated, will bloom sooner than if allowed to remain. Good bulbs can be raised from seeds, and new varieties are thus obtained. Sow the seed as soon as ripe, in rich garden soil.

The bulb of the tuberose very seldom blooms a second time. It may make more small bulbs. The new bulbs of this year's growth will, if well grown, bloom next year. Keep tuberose in a warm dry place through winter. Do not plant until the season is well advanced. Give an abundance of water and sunlight.

The moss-rose grows from cuttings, but not quite as well as some of the teas. Plant a row or bed of cuttings some time this month, and most of them ought to grow. If only one plant is wanted, a branch may be bent down and pegged fast in the ground, a notch being cut to hasten the growth of roots. This is called "layering," and is easily done. The process applies also to nearly all shrubs and to many trees.

CHAS. H. SHINN.

Niles Cal.

THE WORLD'S SUGAR PRODUCTION.—The annual production of the sugar of the world has been approximately calculated as follows: Bengal, China and Siam, 300,000,000 lbs.; British Colonies, 440,000,000 lbs.; Spanish Colonies, 470,000,000 lbs.; Dutch Colonies, 160,000,000 lbs.; Swedish and Danish Colonies, 20,000,000 lbs.; French Colonies, 160,000,000 lbs.; France (beet), 360,000,000 lbs.; Brazil, 150,000,000 lbs.; Zollverein (beet), 550,000,000 lbs.; Austria (beet), 178,000,000 lbs.; Russia (beet), 100,000,000 lbs.; Italy and Belgium (beet), 200,000,000 lbs.; all other sources, including the United States, 400,000,000 lbs.; total, 3,420,000,000 lbs. The annual consumption of sugar per head by different nations varies very considerably, as may be seen by the following figures, based on official data: In the United States, 33 lbs. per head; England, 30; Scotland, 30; Holland, 16; Ireland, 5; Belgium, 6; France, 6.66; Spain, 6.24; Switzerland, 6; Portugal, 5; Denmark, 5; Poland, 5; Prussia (Zollverein), 10; Norway and Sweden, 9; Italy, 2; Austria, 2; Russia, 1.

HOW TO CLEAN ENGRAVINGS.—Soak the print in cold water till all creases are out and it lies quite smooth; then put into a dish containing a solution of chloride of lime with twice its quantity of clear cold water. When the stains have disappeared, put the engraving into plain water, and afterwards dry with blotting paper. For the solution referred to, put half a pound of chloride of lime into a vessel with one pint of water; let it stand, stirring it now and again, for 24 hours, and then strain it through fine muslin till quite clear, when the liquid is to be added to one quart of water. The prints should not be left in the solution longer than is necessary to remove the stains, and the more thoroughly they are washed in cold water afterwards the better for them, for it is liable to rot and destroy it. The wet print requires care in handling.

A CONTRACT has been made for raising the sunken steamship *Pomerania*.

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

Additional Notes of National Grange Meeting.

The fifth day of the National Grange meeting was marked by the recovery of Master S. E. Adams, and his resumption of the chair.

The Master handed in a letter from the delegates from California, regretting that circumstances were such as to prevent them attending this session of the Grange, and enclosing certain proposed amendments to the constitution, which were referred to appropriate committees. He also presented a letter from the Master of Louisiana State Grange, giving reasons for his non-attendance here at this time.

The committee on credentials made a report as to the status of the Connecticut State Grange, but making no recommendations. The report, owing to the peculiar condition of that Grange and the principles involved in its decision, elicited much discussion as to its effect as a precedent. The report was recommitted, with instructions.

Dr. Blanton, from the committee on co-operation, reported favorably on a proposition allowing others than members of the Order to become stockholders and participants with Patrons in the business associations of the Order. This applies more especially to those whose business pursuits prohibit them from joining the Order. The recommendation of the committee was not concurred in by the Grange.

In regard to the introduction and discussion of partisan politics in the Granges, the committee to whom the question was referred reported that the law as laid down in the Digest fully covered the ground, and recommended that subordinate Granges make themselves more fully acquainted with the laws governing them. The recommendation was concurred in.

The committee on resolutions presented a report requiring the executive committee to memorialize Congress to establish the office of the agricultural department of the Government as a cabinet office. The report was unanimously adopted.

In regard to quarantine laws they reported that as the medical commission lately assembled in this city had carefully considered the subject and reported thereon, they propose no action on the subject by this Grange. It was urged that this body, representing the great farming interests of the country, should add its influence to that of the doctors in urging upon Congress some strong and stringent quarantine laws. After discussion, the following, being the original resolution on which the report of the committee was based, was adopted:

WHEREAS, The experience of the present year with regard to the efficacy of a strict quarantine goes to sustain the theory of importation and portability of yellow fever, therefore be it

Resolved, That the National Grange, Patrons of Husbandry, urge upon the consideration of the Congress of the United States the importance of the passage of an effective system of quarantine laws.

In regard to the representation of Connecticut in the Grange, which was discussed in the morning session, the committee reported a resolution allowing the delegates here present to sit as representatives; also, another resolution directing the Master of the National Grange to look into the condition of Connecticut State Grange, and, if it is not in good working order, to revoke its charter, and place the Granges in that State under the jurisdiction of Massachusetts State Grange. The first resolution was rejected, and the second adopted.

Mr. Darden, of Mississippi, presented a resolution appointing the Secretary and Treasurer a committee to adjust the claims of the several State Granges now under the consideration of the Grange. Adopted.

Mr. Ware, of Massachusetts, offered a resolution looking to the passage of a law requiring more humanity in the transportation of live stock, and memorializing Congress on the subject; and requesting the teachers in all the States to instill into the minds of their scholars the necessity of the preservation of insect-eating birds and their nests.

The question was divided and the first portion adopted. On the second, Mr. Shipley, of Oregon, protested against its passage. He said that it would do very well in Massachusetts, where there are few birds and many insects, but in his State the case was very different. He was sure that if the robins and jaybirds were not killed there would be no fruit gathered. He had a vineyard of four acres, and he was satisfied that unless they killed the birds he would not gather a single grape.

Mr. Sherwin, of Wisconsin, offered a resolution proposing to purchase a good house in some convenient locality for the use and meetings of the National Grange, at a price not to exceed \$10,000. The resolution was referred to the committee on the good of the order.

Mr. Long, of Texas, moved an amendment to the constitution regarding sixth degree members.

Mr. Woodman, of Michigan, offered a resolution asking the Grange to memorialize Congress on the subject of the patent laws,

protecting the innocent purchaser of such articles.

Mr. Aiken, of South Carolina, gave a very interesting statement of the fate of many of these memorials in Congress, and what had been done in Congressional committees on this subject of revising and arranging the patent laws.

The committee on memorials presented memorials regarding the death of Thomas Rowland Allen, late Master of the State Grange of Missouri.

Mr. Eshbaugh, of Missouri, in presenting the memorial, paid a high tribute to the worth and usefulness of Mr. Allen, and eulogized him not only as a Patron, but as a man, a friend, and a Christian gentleman.

Remarks in the same strain were made by Messrs. Diuiddie, of Indiana; Chase, of New Hampshire; Aiken, of South Carolina, and Ellis, of Ohio.

The resolutions were unanimously adopted by a rising vote.

The Grange then adjourned until eight o'clock for the purpose of conferring the fifth and sixth degrees upon such members as desired to take them.

There have been brought here by members from various States specimens of products which are highly creditable. The wheat and apples from Oregon and Wisconsin were really splendid specimens in that line. West Virginia sent some woolen fabrics, which were very fine, and as soft and good as any mill in the country could turn out.

Pilot Hill Grange.

EDITORS PRESS:—Once more, Pilot Hill Grange, No. 1, sends greeting to you to impress on your mind the fact that it still continues its labors as a Grange. Saturday evening, December 7th, was our annual election of officers, and the attendance being much larger than during the past few months we all felt very happy to meet so many brothers and sisters, and felt encouraged as to the future attendance of our Grange.

About 11 o'clock, when all the officers had been duly elected, and the second degree administered to a brother, the Worthy Master declared a recess of short duration, which was intercepted by Bro. T. D. Brown mentioning that there was a little business to be transacted a little out of the usual order, and to consummate which, a third party, not a member of the Grange, must be called in to officiate in the bonds of matrimony. Accordingly the Rev. Mr. C. was called into the hall, and in the presence of its Patrons, Pilot Hill Grange, No. 1, became the scene of a wedding, and Bro. T. D. Brown united his destiny with that of one of our sister Grangers, an occasion long to be remembered by the Patrons of Pilot Hill Grange. After partaking of a sumptuous repast, made merry with the congratulatory wishes of all, the Grange was called to order and the business of the evening brought to a conclusion. We devoutly hope that many of our Granges will follow our good example, and be the scenes of many such pleasant weddings. J. W. D.

Election of Officers.

ALHAMBRA GRANGE, CONTRA COSTA Co.—Election Dec. 4th. Installation Jan. 4th, 1879. Dr. J. Strentzel, M.; Henry Hollinbeck, O.; Mrs. Maria B. Lander, L.; Elam B. Barber, S.; S. B. Hickman, A. S.; James McIlhenny, Sr., C.; Henry Raap, T.; William A. Traver, Sec'y; John E. Martin, G. K.; Mrs. Margaret Kelley, Ceres; Mrs. B. R. Holliday, Pomona; Miss Lily Griffin, Flora; Mrs. Robert Jones, L. A. S.; Thomas Griffin, Trustee for three years.

EDEN GRANGE, HAYWOOD, ALAMEDA Co.—Election Dec. 14th. J. Russell, M.; L. K. Anway, O.; Sister R. Perham, L.; J. Webster, S.; B. Wood, A. S.; Sister R. Knox, C.; L. Stone, T.; William Owens, Sec'y; D. D. Mann, G. K.; Sister Wood, Ceres; Sister McDermitt, Pomona; Sister Webster, Flora; Roxie Dennis, L. A. S.; Trustee for three years, Bro. L. Perham; for two years, Bro. W. Owen.

FRANKLIN GRANGE, No. 147, SACRAMENTO Co., CAL.—Election, Dec. 7th: Wm. Johnston, M.; J. B. Bradford, O.; J. F. Freeman, L.; P. B. Bradford, S.; W. A. Johnston, A. S.; J. W. Moore, C.; P. R. Beckley, T.; Mrs. S. G. Bradford, Sec'y; Christian Benedix, G. K.; Mrs. Annie Bradford, Ceres; Mrs. A. Moore, Pomona; Miss Belle Johnston, Flora; Mrs. Hannah Flexman, L. A. S. Installation, to take place Jan. 4th.

NEWCASTLE GRANGE, No. 241, PLACER Co.—Election Dec. 14th. R. M. Nixon, M.; G. L. Threlkel, O.; Robt. Johnson, L.; I. F. Tabor, S.; J. H. Mitchell, A. S.; W. J. Wilson, C.; G. W. Threlkel, T.; G. Stuart Nixon, Sec'y; J. T. Woods, G. K.; G. A. Mitchell, Ceres; Mrs. J. Threlkel, Pomona; M. R. Greeley, Flora; M. J. Nixon, L. A. S. Installation, Jan. 12th, 1879.

POINT OF TIMBER GRANGE, No. 14, CONTRA COSTA Co.—G. W. T. Carter, M.; A. Richardson, O.; J. E. W. Carey, L.; W. M. Moore, S.; A. V. Taylor, A. S.; Thomas McCabe, C.; C. J. Preston, T.; S. M. Wills, Sec'y; H. C. McCabe, G. K.; Sister A. Richardson, Ceres; Sister George Copple, Pomona; Sister Lovina Plumley, Flora; Sister J. E. W. Carey, L. A. S.

AGRICULTURAL NOTES.

California.

BUTTE.

AN OLD ORANGE TREE.—Colusa Sun, Dec. 14: The first orange tree we ever saw in bearing in this State was at Bidwell's Bar, where they have an annual snow fall. Speaking of the same tree we saw 14 years ago, and in noticing some oranges received from J. B. Ketchum, who planted the tree, the Oroville Mercury says that some of them measured 15½ inches and weighed 2½ pounds, and that when the tree from which these were taken blossomed last spring, its branches were loaded with 600 oranges of the previous crop. Since that time Mr. K. has plucked about 300 of them, and estimates that there are now hanging upon the limbs 300 of 19 months' growth and 650 of this season's crop. The tree is 24 years of age—probably the oldest in the county—and measures fully 14 inches in diameter at the butt.

RAISIN MAKING.—Chico Enterprise, Dec. 14: C. L. Durban, of Mesilla valley, has been successfully engaged in the business for 11 years. He has lived on the farm he owns and tills for more than 20 years. He early turned his attention to the culture of the grape, and has experimented with all the more prominent varieties. In 1867, he first tested the white Muscat of Alexandria, as a raisin grape. Mr. Durban's vineyard is situated in a long sheltered valley, shut in on all sides by Table mountain. Here he is seldom or never visited by frosts, and the temperature is remarkably even throughout the year. Mr. Durban spreads the bunches of grapes, after picking off all imperfect or unsound berries, on trays made of shakes, the bottoms of slats, thus giving a free circulation of air around them. The trays are placed on scaffolds, and there left day and night unless the weather should be wet, in which case they are piled under a shed for that purpose. This season there has been considerable damp, cloudy weather, making the drying slow and expensive. After the grapes are sufficiently dried, the test requiring the stems to break brittle, they are packed in large baskets and stored in a perfectly dry, cool cellar, where they go through a sweating process. In a few weeks they are in condition to be boxed ready for market. Mr. Durban has not kept an accurate account of the yield and expenses of raising and preparing for market. He is satisfied that, with a fair season, he can produce fully one ton of marketable raisins per acre. He finds no difficulty in disposing of his entire crop at 16 cents per pound, which would give \$320 per acre as the gross yield. Just what portion of this is expense he cannot say, but he considers the business very profitable and has no thought of turning his attention to wheat raising. Although not so long in the business as Mr. Durban, Gen. Bidwell has engaged much more largely, having planted fully 300 acres of land to raisin grapes. He has experimented with his patent hot-air drier in curing them this season, but with indifferent success, those dried on tables and trays in the sun being much superior in flavor and appearance.

COLUSA.

RAILROAD LANDS.—Sun, Dec. 14: This has been a hard year on the farmers in this part of the State, and the consequence is that many of those in the upper end of the county, who purchased railroad land at from \$15 to \$30 an acre, paying one-fifth down, will not be able to make the second payment, now fully due. As the railroad company got such an exorbitant price for the land, which cost it nothing, we think it no more than right that the interest for this year should be remitted, and the company should not think of anything more stringent than postponing the time for payment of the second instalment at least one year.

ORANGES.—L. F. Moulton sent us this week an orange on the branch, grown at his place, which measured 12 inches around the shortest circumference. He now has only a few of these trees in bearing, but he has some 200 budded with the same fruit, that will be in bearing in a couple of years more. Every experiment in this valley shows that the orange is an entire success.

FRESNO.

A SCANDINAVIAN COLONY.—Republican, Dec. 13: The well-known grain ranch about three miles east of Fresno, formerly belonging to H. Voorman, of San Francisco, and cultivated for the last three years by Antonia Days, has been divided into tracts of 20 acres each and offered for sale at \$15 an acre. The ranch consists of 2,240 acres and is supplied with water by the King's River canal. The soil is a sandy loam, well adapted for irrigation, quite level and in every way suited for a colony settlement. The water for irrigation is secured by purchase of shares in the canal at \$50 each, giving an absolute ownership in the canal itself. A large number of Danes have already purchased lots, making the nucleus for a settlement and giving it its name. No better citizens have come into our county than the Scandinavians, and as the liberal terms offered by the owner of the land makes it possible for any industrious man to secure a home, we may expect to see this entire colony tract soon occupied by those who are certain to thrive by their own industry. The well known, honorable character of both the owners of the canal property and the land, as well as of the resident manager, Mr. Bernhard Faymonville, is a guarantee that the enterprise is meritorious, and that all dealings will be straightforward and fair.

LOS ANGELES.

CALIFORNIA WINES.—Anaheim Gazette, Dec. 14: The great advance in the price of California wine is one of the gratifying features of the year; and there is ample evidence that the rise in price is not spasmodic or temporary, but is likely to continue. There are two causes to which must be ascribed the increased value of our wines. The first is the rapidly decreasing area of vineyards in France, brought about by the destructiveness of the phylloxera. We read accounts of whole districts being decimated by the pest, but in no instance do we hear of the ruined vineyards being replanted. So complete and rapid is the work of destruction that the people of the ruined districts seem to have given up all idea of replanting. The second cause of the rise in California wines is the increased demand for them in the Atlantic States. That this demand will continue there is no reason to doubt, as when once the popular tide is turned in any direction, it is next to impossible to stem the current. Not only that, but, having once become familiar with pure California wine, it will be impossible for the adulterated foreign article ever to regain its lost prestige. Wine dealers and growers on this coast have long known that it was only a question of time when the purity and superiority of native wine would be recognized by the public; and now that it is placed fairly before the people in the populous Atlantic States its merits will secure for it the place long occupied by French and other foreign wines.

NAPA.

ORANGE AND LEMON CULTURE.—Register, Dec. 14: Very little attention has in the past been paid to the cultivation of orange and lemon trees in Napa valley, those that grow very thrifflily in many gardens being raised more as curiosities than as food. In a yard but two blocks distant from this office are orange and lemon trees that bear well. Fruit of good size, in an unripened condition, hang on their branches. At the residence of Mr. Hudeman, Spout Farm, a few miles west of town, on one of the ridges of hills separating this valley from that of Sonoma, these trees have been growing for some years, and their fruit has matured. At the Napa Soda springs are to be seen trees that have on their branches ripe and unripened fruit of these varieties, seemingly doing as well as those in the counties to the south of us. If we mistake not, in the future some enterprising fruit grower in this valley will turn his attention to orange and lemon growing, and be successful in the business.

SACRAMENTO.

EDITORS PRESS:—With the long cold winds and freezing nights, the progress of farm labor is slow. Every particle of moisture seems to be drawn out. Many plants have suffered, ponds frozen over, and the laborer has to rub his hands and keep his body in motion to keep up circulation. Indications look to a dry winter. The question is repeated, what's your idea of the future? Hope and expectation are thus resting in what may take place, that is not yet revealed. The extension of time is not given up till New Year's. If no change, a dry winter is most probable, and the condition of things must be so arranged to meet the emergency. Farmers are watching the market, selling their varied produce as time and want demand. All the cultivated land now sown is anxiously waiting for the blessing of long and heavy rains. Holidays are approaching. The Christmas goods are arranged to be tempting to the eye. Children are looking forward for happy times as it draws near. Through city and county the Christmas tree will be the attraction of the evening, laden with tempting articles—direct importation from Santa Claus.—Geo. Rich, Sacramento.

SAN JOAQUIN.

ANNUAL MEETING OF THE AGRICULTURAL SOCIETY.—Independent, Dec. 14: The annual meeting of the Agricultural Society was held on Saturday afternoon at Mozart hall, and was attended by about one hundred of our best citizens, from city and country. President Shippee presided. J. M. La Rue, Secretary of the society, read the annual address of the President, as well as the reports of the Secretary and Treasurer, which were received and adopted. The next business was the election of a President. L. U. Shippee and R. C. Sargent were placed in nomination, but the latter withdrew, leaving the field clear for Mr. Shippee, who was unanimously elected, the Secretary casting the ballot by instruction. Mr. Shippee's election was received with cheers, and he was called on for a speech. He thanked the society for their kindness and their renewed expression of confidence in his executive ability, said he was more of a worker than a talker, and promised to work as faithfully for the interests of the society in the future as he had endeavored to do in the past. The election of a board of six managers followed with the following nominations: R. C. Sargent, J. E. Moore, J. A. Shopherd, H. W. Weaver, Fred Arnold, Jas. A. Louttit, Geo. Chalmers, J. M. Garwood, Geo. Castle and A. W. Simpson. The election was by ballot for all the members at once. Messrs. Sargent, Moore, Shepherd, Arnold, Weaver and Louttit were elected. Four delegates to the State Board of Agriculture were next elected by ballot as follows: Hon. Geo. S. Evans, Jas. Cole, Geo. Chalmers and H. T. Dorrance. Mr. Dorrance offered the following resolution which was adopted: Resolved, That the board of managers are hereby directed to have printed 1,000 copies of the act concerning agricultural

societies, and the constitution this day adopted, together with such by-laws as the board may adopt for the use of the members thereof. The society then adjourned.

SONOMA.

AGRICULTURAL SOCIETY ELECTION.—*Democrat*, Dec. 14: The annual election for officers of the Sonoma and Marin Agricultural Society, was held on Saturday at E. S. Lippitt's office in Petaluma, with the following result: Directors, Hon. J. Mc. M. Shafter, H. Meacham, E. Denman, A. Morse, Robert Crane, Robert Seavy. Hon. A. P. Whitney was elected President. Prof. Lippitt, who has served as Secretary since 1872, declined re-election, and no selection was made. The report of the retiring Secretary shows that the society is in a prosperous condition. In 1872, the receipts were \$4,568, in 1878, \$6,368, showing an increase of nearly \$2,000. This does not include amounts allowed by law for the support of the institution, which in 1873 and 1874 amounted to \$2,000 a year, and this year \$1,500. During the same period the capacity of the pavilion has been doubled, and an art gallery added to it. It will doubtless be difficult for the Board of Directors of the society to find a successor to Mr. Lippitt, one who will manage the institution with as much zeal, energy and enterprise.

THE POTATOES.—*Petaluma Argus*, Dec. 13: Potato digging is about at an end in this locality. The yield this year has been fully an average, and the quality of the tubers has been more than ordinarily good. Petaluma potatoes command the highest price in San Francisco, and the advance in prices this week places a good deal of silver to the credit of our farmers and local speculators. There is a great quantity of potatoes in store in Petaluma, the estimate being about 75,000 sacks, and 25,000 stored in the country. We hope wheat prices will be maintained, and our farmers will receive the benefit of the upward market.

YOLO.

THE RAMIE PLANT.—*Democrat*, Dec. 14: We were yesterday presented by Mr. L. Dietz, of this town, a specimen twig or sprout of the ramie plant five feet in length, grown in his garden; the one in question being an average in length and size among some six or seven springing from the same slip. As the *Democrat* has before asserted, the growing of this plant, and the attendant benefits therefrom, is bound in time to become a source of great wealth to this county. The experiments of Mr. H. M. Jennings have amply proved the feasibility of the production of the plant in the soil and climate peculiar to this locality. Mr. Jennings, who has had great experience both in the raising and preparation of the plant for market, is satisfied that ramie growing can be made one of the most profitable industries of the county. We hope to see some of our farmers, who have facilities for irrigation, take hold of this business and make a thorough trial of its virtues and benefits.

RAIN NEEDED.—*Mail*, Dec. 14: We learn from a resident of the Buckeye district of Yolo county that grain is actually suffering for want of rain. Most of our Yolo farmers say that it is not suffering yet in other parts, and that it can stand another week or even two of fair weather. There are only three more days in the range of our guess of last week, and it looks very much now as though we were not a first-class guesser, although we still believe we will have rain before another Sunday.

Oregon.

FRUIT-TREE FRAUDS.—*Willamette Farmer*: Mr. L. Greeu, of the Western Reserve Nursery, wrote October 26th, that he had no agents and did not know Robinson, and did not claim to know Finnucan, the two men who last winter and spring canvassed for, and this year are delivering trees. November 26th he wrote to the editor of the *Willamette Farmer* from West Oakland, Cal., that Finnucan was his agent. Mr. Green changes his tune too quickly, and merely proves that he also is unreliable and not to be trusted. Finnucan asserted that the first letter must be a forgery, but both are in the same handwriting. In his letter to Mr. Mascher, L. Green says that Mallet & Hamman buy trees of him at wholesale, and are good men. What his indorsement is worth may be judged from the fact that Mallet & Hamman were the men who swindled the people so terribly last year. Their history is one of most reckless rascality. They went to various nurseries and purchased third and fourth-class trees; seedlings were as good as anything for their use; they would take up worthless roses, buy cheap shrubs and evergreens, any kind of fruit trees that could be called trees, and with them they filled orders at fabulous prices. Some nurseryman suspected them, and would not let them have trees of any kind, and then they would buy through outsiders. We hear that red cedars, that were sold at ten cents apiece one year and transplanted to another place, were the next year sold by these scoundrels at five dollars each as "Virginia Junipers." A great many citizens of Salem bought worthless roses, cheap evergreens, and common shade trees, paying ten times their value, on the assertion that they were something very choice and rare. During the past week we have seen three more nurserymen, and heard of the way these men secured their stock. Of one they bought evergreens at 90 cents, which they used to fill orders for Irish juniper at \$5. The Kilmanock willow that cost them 25 cents they sold to Dr. Carpenter for \$5, under some fictitious name. Many of the things they sold as plants never known in Oregon are for

sale at our nurseries at very low prices. It is not possible or necessary to recite all their lies and rascality, but it can be proved in a thousand instances, and they took a reasonable fortune away with them, stolen from credulous farmers, who were deceived by their wonderful pictures of fruits and flowers, and their multitude of lies. Not daring to show their faces here again, they left our people to be gulled by their successors. We have it from a man who worked for them last year, that they continued to operate through those other men, and we see no reason to doubt it.

"THE HOME DOCTOR."—This is the title of a book presented to us by the author, Dr. George M. Bourne, of San Francisco. It is a book for the people, and purports to be a guide to health and for the home treatment of diseases. It is gotten up in neat style, with large, clear print, showing that the Doctor, while guiding his readers to health, does not intend to be guilty of injuring their eyes. The Doctor is an iconoclast among doctors generally, and among water-cure doctors in particular. Of the merits of his system the public can best judge by trying it. It certainly has this merit, that the trying of it can injure no one. Moreover, it is based, in general theory, upon simple, common-sense principles. The Doctor prefers keeping health to restoring it, and believes that the physician should be called in to direct the habits of every day life oftener than to administer medicines for cure after laws have been broken. He believes in the spreading of medical knowledge among the people, and to this end the book in hand has been published. In pursuance of this object the work is free from technical terms and states its simple cures in equally simple language. Without attempting to even outline the contents of this well-filled book, we will merely mention that at the present moment what the Doctor has to say of glanders, diphtheria and yellow fever will prove of special interest.

KERN VALLEY COLONY.—We have read with interest a well written pamphlet containing the prospectus of the Kern Valley colony, which it is proposed to plant upon the finely improved Livermore ranch, and upon adjoining lands which can easily be brought under profitable culture. These lands are to be sold to colonists upon easy terms. It is desired to divide the land so that each colonist shall have no more than he can profitably handle, and 80 acres is the largest quantity that any one colonist can buy. The fertility of the land has been fully established by years of cultivation on adjoining tracts, and abundance of water is attainable. It would be well for those who are looking up the opportunities of this State to apply for the pamphlet to Mr. H. P. Livermore, 531 Market street, San Francisco.

A COLD SHEEP DIP.—The attention of flock-masters will be drawn to the advertisement by Falkner, Bell & Co., of a new sheep dip which is said to be very effective and which may be applied cold—that is mixed with cold water and without the cost and trouble of heating up which pertains to other preparations. Thus it may be easily used in places where a heated mixture could not be had, for instance while the sheep are on the move or in new localities. It is an English preparation, and is called "Little's Chemical Fluid." It brings a host of commendations from English sheep owners, and is ranked very high by a number of California sheep husbandmen whose letters we have seen.

AN AUTOMATIC INCUBATOR.—The many poultry growers who are thinking of the advantages of artificial incubation, would do well to send for information concerning Day's automatic incubators, as advertised at the office of the Stylograph, 24 California street, San Francisco. This apparatus comes to this State with the highest recommendation from trustworthy Eastern authorities, and should be examined and tested by our poultry producers.

INSURANCE.—An announcement of general interest is made in our advertising columns by the Pacific Mutual Life Insurance Co., of California. They have decided upon a new low rate policy, which all should study up to learn its advantages. Agents are wanted to promote the business of the company in different parts of the coast. The standing of the company is first-class, and its announcements worth reading.

The gold yield of Georgia for the past year is estimated at \$500,000.

Academy of Sciences.

At the last meeting of the California Academy of Sciences, Prof. Price read a very interesting paper on

Artesian Wells,

Prepared by C. D. Gibbes, C. E., which we expect to present more fully in a few weeks. The writer considered the wells of San Francisco, devoting most of his time to those of the Van Ness basin, presenting drawings of the latter, and also of the outcrop of sandstone and serpentine in the neighborhood. He next took up the wells bored in San Francisco bay under the direction of Morgan & Co., the oyster raisers. The most interesting part of the paper was that descriptive of a section presenting the country from San Francisco east through Mt. Diablo and Stockton to the foothills of the Sierra Nevada. The section showed the Stockton well, and also that upon the Norris grant. The latter is now about 2,120 feet deep. The question as to whether deep borings in San Francisco will succeed in striking water from the Sierra Nevada, was discussed. Mr. Gibbes' conclusion was that no such water can be struck in San Francisco. However, we do not think that his arguments were at all conclusive. He had no data whatever to prove that deep-lying strata, having their outcrop in the Sierras, do not pass under us to the ocean. And such strata might be so bent and tilted to be much nearer the surface at San Francisco than they are at the Norris grant, and at the same time sufficiently regular to hold water. This is of course mere theorizing, with no facts to back it; but at any rate Mr. Gibbes presented no facts to the contrary.

After the paper was read, the subject was discussed at some length by the members. Dr. Harkness gave further facts concerning the Norris well. The water changes in height quite frequently, the level varying as much as 36 to 50 feet. Several layers of wood have been passed through and illuminating gas has been struck. Prof. Davidson spoke of the change in level in wells near tide water. He thought it due to the increase and decrease of pressure on flexible strata. When it was questioned whether the small rise of tide, in San Francisco bay for instance, could affect strata at depths of 200 feet or more, Prof. Davidson cited the instance of the tilting of the hill on which Greenwich stands, in support of his opinion. Every 24 hours the hill rises and falls, an extremely minute distance of course, but sufficient to be detected by delicate instruments. Prof. Davidson thought it due to the rise and fall in the Thames. Prof. Thos. Price reported his analyses of water from San Francisco wells, that from the Van Ness basin was characterized by a large percentage of calcareous matter. That from the lower portion of the city contained more magnesia, indicating that it washed upon the underlying serpentine. The difference in the waters from the two localities proved that they were in separate basins, and did not come into contact with each other. One remark of very great importance was made by Prof. Price, viz: that the water was noticeably free from all sewage matter. Dr. Gibbons seemingly contradicted this. He believed that sooner or later the water must be contaminated with sewage, as there were no truly artesian wells in San Francisco, all of them being supplied by drainage from the immediate locality.

ART INDUSTRIAL SCHOOLS.—A special to the *Call*, dated New York, Dec. 16th, says: The *World's* Washington special says: J. Wilson MacDonald, sculptor of New York, called on the President Saturday and presented the subject of art industrial schools for the education of young mechanics of both sexes in the higher branches of mechanism. Mr. MacDonald proposed that these art industrial schools should be founded in all great manufacturing and mercantile centers in the country, and be supported by the Government and conducted as are the same kind of schools in France and England. He believed the unexampled mechanical ability, prosperity and wealth of France are due, chiefly, to her 400 art industrial schools. Mr. MacDonald also presented a plan of an American academy of fine arts—the students to be chosen from the various Congressional Districts. The President manifested a lively interest in the matter.

SENATOR BOOTH'S bill provides that when lands reserved for railroads, or on account of Mexican grants, are restored to the public domain, all persons who have previously and continuously settled on them with the intention of claiming the lands, on homestead or pre-emption laws, shall be entitled to all benefits of said laws, and date back such rights to the date of actual settlement.

DEAL WITH US KINDLY, ETC.—"We sort of feel it" in the bones of our pockets, that there are some of our subscribers who can, with a little proper effort, send us their subscription money "about these days." We therefore modestly ask all who can to present us with the needful, just now, you know.

A FLOURING MILL is wanted at Reading, the head of railroad transportation in Shasta County.

News in Brief.

FRESH freshets at the East.
INDIAN Territory is improving.
BUSINESS is prostrated in Odessa.
PARLIAMENT has adjourned until Feb. 13th.
The British government is sustained by Parliament.

THE Russians will evacuate Adrianople in January.

ONE hundred thousand dollar robbery at St. John, N. B.

HENRY WELLS, of Wells, Fargo & Co's., express, is dead.

THE Russians have decided to leave 50,000 men in Bulgaria.

THE Argentine States and Chile have settled their territorial differences.

THE President has nominated L. A. Hildreth to be Postmaster at Chico.

A JUDGE of Elections has been convicted in Memphis for ballot-box stuffing.

THE last Fenian prisoner confined in Ireland will be released before Christmas.

THE fall of Plevna was commemorated in the churches at Bucharest, Dec. 10th.

THE new budget shows that the revenue of Turkey is 16,000,000 Turkish pounds.

A TERRIBLE famine prevails at Magador, Morocco, the deaths numbering 25 daily.

THERE were 42,000 pounds of wool shipped from Scottsburg, Oregon, during the year.

A MAN has been taken into custody in London for threatening the life of the Queen.

A FRIEND of Bayard Taylor writes from Dresden that Taylor is hopelessly sick with dropsy.

THE Directors of the Commercial Bank of Odessa, Russia, have decided to go into liquidation.

THE First National Bank and Commercial Bank, of Saratoga, N. Y., have closed their doors.

TWO Philadelphia stock over-issuers have been sentenced each to 10 years in the Penitentiary.

JOHN RUSKIN will decline a re-election to the Slade Professorship of Fine Arts in Oxford University.

THE colliers in South Yorkshire and North Derbyshire, England, are to be reduced 12½% in their wages.

A MAN at Leominster, Mass., has been killed by inhaling the sulphur from friction matches to cure at attack of diphtheria.

LAST week the barge *Grand Island*, en route from Colusa to San Francisco, grain laden, sprung a leak and sunk while passing Red Rock.

IN the Cuban elections the Liberal Conservatives were successful in the greater part of the island.

THE manager of a private bank, in England, lost \$2,000,000 of the bank's money during November.

EFFORTS are making to impeach Henry W. Blodgett, Judge of the United States Court at Chicago.

MRS. APPEGATE made an unsuccessful attempt to take her own life lately at Walla Walla, W. T.

A SINGULARLY well-executed counterfeit of the standard silver dollar has made its appearance at Chicago.

IT is reported that Conkling announces himself as irrevocably for Grant as the next Presidential candidate.

THE Northern Pacific Railroad Company have struck an eight-foot nine-inch vein of coal at Wilkeson, W. T.

MAHMOUD DAMAD PASHA has been appointed Governor of Tripoli, in Barbary, which is equivalent to banishment.

THE census taken last September gives the population of Tokio at 1,036,771. There are 236,961 houses in Tokio.

LADY GOOCH, accused at London of conspiring to palm off a spurious child on her husband as his heir, has been acquitted.

EIGHTEEN thoroughbred brood mares have been purchased in Lexington, Ky., by ex-Governor Stanford for his Palo Alto ranch.

THE government of Denmark has granted the administration of Santa Cruz a loan for the purpose of restoring the sugar plantations.

THE total debt of New York city, less sinking fund, October 31st, was \$125,224,317.21, or about \$6,500,000 less than at the same date last year.

A CONVENTION of leading military officers of the different States will be held at New York in January, to take action looking to a national organization.

RICHARD READE has been recognized as Consul of England for Pennsylvania, Ohio, Indiana, Michigan, Illinois, Iowa and Wisconsin, to reside at Philadelphia.

THE fencing of North Carolina is valued at \$10,000,000, and the stock at \$2,000,000. In other words, it takes \$5 worth of fencing to protect the crops against \$1 worth of stock.

NO season within memory has been so unfortunate for the Greenland whaling fleet as that just past. The whole Scotch fleet secured but six whales, and one steamer was totally lost.

A LIVERPOOL firm is reported to have purchased a steamer for the purpose of importing live pigs from America. The vessel is being fitted up to hold over 2,000 pigs, as well as cattle.

THE first shipment of horses from America for the use of the French army arrived during the past week at Havre, and were ordered through Consul Bridgland. The French Military Inspector is much pleased with them.



A Christmas Song.

The merry bells are ringing across the silent plain;
Hope in each heart is springing now Christmas comes again;
Oh, welcome, merry Christmas! Our blithest, sweetest lays
Of gratitude and gladness we carol in thy praise.

'Tis Christmas brings the meeting of hearts whose love we prize,
The words of pleasant greeting, the fondly beaming eyes,
The assurance of affection that Time can ne'er destroy,
The presence of our dear ones to share our Christmas joy.

We hear the anthems pealing, and join the sacred strain,
While tides of softened feeling flow o'er each anxious brain;
Time brings his freight of shadows to every human soul,
But Christmas points us onward to reach the cloudless goal.

The sorrows and the trials, the dangers of the way,
The nameless self-denials and cares of every day,
Are by his presence banished; for who hath time to sigh
And brood o'er selfish trouble, when Christmas draweth nigh?

Yet often as we journey we think the world is drear;
The path is steep and thorny, our spirits sink with fear;
Oh, then breaks forth the sunshine we sought so long in vain,
And Christmas finds us singing our grateful songs again!

'Tis darkest ere the dawning, and, when despair is nigh,
Flow off the golden morning has broken through the sky;
And hearts that bowed in sadness have cast their doubts away,
Because unlooked-for blessings have come with Christmas Day.

And so, whilst we are twining our holly-wreath to-night,
Where loving eyes are shining and smiles are beaming bright,
We think of those who sorrow for friends no longer near,
And ask for Christmas gladness their stricken hearts to cheer.

Sweet childish voices, singing, repeat the joyful lay
That angel bands came bringing the first glad Christmas Day;
Our gladdest, warmest welcome, our hearts' best gifts we bring,
To celebrate the coming of Christmas as our king!

A Lake of the Sierra.

One golden noon, when all the secret ways were free,
I found Sierra's heart; the mountains round were three,
That to their knees and loving arms did gently take
Each quiet ripple of a tender mountain lake.

The long, untrodden grass was full of passing wings,
Of idle birds, and toiling bees, and gauzy things;
While little shining leaves and modest blooms of white
Swung in the gentle wind, and all the world was bright.

Over the lake's blue edge the beaded fern leaves bent,
Willow and aspen boughs their shadow's witchery lent,
While in its changeful breast were gay and glorious shapes
Of all the mountain slopes and gray, reflected capes.

Still, on his steadfast wing, the hawk above was moored;
So near it was as if a cloud the sun obscured;
Faint from his sunny slope there called an idle quail,
By distance mellow grown it seemed to float and fail.

The far off summits of the peaks were white and chill,
They touched the purple clouds, and, satisfied, were still;
And the long slopes, from leaves of fern to heights of pine
And wreaths of snow, had made the quiet lake their shrine.

—Charles H. Shinn, in *Argonaut*.

Saved by a Song.

A Christmas Story.

It was Christmas Eve. A cold, old-fashioned Christmas, with snow lying thick on the ground and still falling heavily, with a touch of fog in the air. It was past 10 o'clock, and the streets and lanes of the great city were all but deserted. Merchant and broker, clerk and warehousemen, and the rest of the busy crowd who had thronged those streets by day had one by one drifted away to their homes, and the lofty warehouse loomed black and forbidding over the silent thoroughfares. Here and there the gleam of a solitary window struggled ineffectually with the outer darkness, and served but to bring into stronger relief the general gloom and solitude.

And nowhere was the darkness deeper or the sense of desolation more profound than in St. Winifred's court. St. Winifred's is one of those queer little alleys which intersect the heart of eastern London, and consists, with one exception, of houses let out as offices, and utterly deserted at night. The court is bounded on one side by St. Winifred's Church, while in one corner stands a quaint old house, occupying a nearly triangular piece of ground and forming the exception we have referred to, having been for many years the residence of St. Winifred's organist, Michael Fray.

The only sign of life, on this Christmas Eve in St. Winifred's court, was a faint gleam of flickering firelight proceeding from one of the windows of the quaint three-cornered house in which Michael Fray passed his solitary existence. Many years before the period of our story the same month had taken from him wife and child, and since that time Michael Fray had lived desolate, his only solace being the rare old organ, the friend and companion of his lonely hours. The loss of his wife and daughter had left him without kith or kin. His father and mother had died in his early youth, an only brother, a gifted but wayward youth,

had in early life run away to sea, and had there found a watery grave. Being thus left alone in the world Michael Fray's love for music, which had always been the most marked feature of his character, had become intensified into an absolute passion. Evening after evening, when darkness had settled on the city, and none could complain that his music interfered with business or distracted the attention from the noble clink of gold, he was accustomed to creep quietly into the church and there "talk to himself," as he called it, at the old organ, which answered him back again with a tender sympathy and power of consolation which no mere human listener could ever have afforded. The organ of St. Winifred's was of comparatively small size and made but scanty show of pipes or pedals; but the blackened case and yellow much-worn keys had been fashioned by the cunning brain and skillful fingers of "Father Smith" himself, and never had the renowned old organ builder turned out a more skillful piece of workmanship. And Michael Fray, by use of years and loving, tender study, had got by heart every pipe and stop in the rare old instrument, and had acquired an almost magical power in bringing out its tenderest tones and noblest harmonies.

Hear him this Christmas Eve, as he sits before the ancient keyboard, one feeble candle dimly glimmering over the well-worn page before him; flickering weirdly over the ancient carving, and calling into momentary life the effigies of mitred abbot and mailed crusader. A feeble old man, whose sands of life have all but run out; a sadly weak and tremulous old man, with shaking hands and dim, uncertain eyes. But, when they are placed upon those yellow keys, the shaking hands shake no longer; the feeble sight finds no labor in those well-remembered pages. Under the touch of Michael Fray's deft fingers the ancient organ becomes instinct with life and harmony. The grand old masters lend their noblest strains, and, could they revisit earth, need ask no better interpreter. From saddest wail of sorrow to sweetest strain of consolation—from the dirge for the loved and lost, to the prelude of the jubilant victor—each shade of human passion, each tender message of divine encouragement, take form and color in succession, under the magic of that old man's touch. Thus, sometimes borrowing the song of other singers, sometimes wandering into quaint Æolian harmonies, the spontaneous overflow of his own rare genius, Michael Fray sat and made music, charming his sorrows to temporary sleep.

Time crept on, but the player heeded it not, till the heavy bell in the tower above his head boomed forth the hour of midnight and recalled him to reality again. With two or three wailing minor chords he brought his weird improvisation to an end.

"Dear me," he said, with a heavy sigh, Christmas again! Christmas again! How many times, I wonder! Well, this will be the last; and yet Christmas comes again, and finds me here still, all alone. Dear, dear! First, poor Dick; and then my darling Alice and little Nell—all gone! Young and bright and merry—all taken! And here am I—old, sad, and friendless—and yet I live on, live on! Well, I suppose God knows best! While thus thinking aloud, the old man was apparently searching for something among his music books, and now produced an ancient page of manuscript, worn almost to fragments, but pasted for preservation on a piece of paper of a later date. "Yes, here it is, poor Dick's Christmas song. What a sweet voice he had, dear boy! If he had only lived—but there! I'm murmuring again. God's will be done!"

He placed the music on the desk before him, and, after a moment's pause, began, in tender, flute-like tones, to play the melody, at the same time crooning the words in a feeble voice. He played one verse of the song, then stopped and drew his sleeve across his eyes. The sense of his desolation appeared to come anew upon him; he seemed to shrink down, doubly old, doubly feeble, doubly forsaken—when, lo! a marvel! Suddenly from the lonely street without, in that chill midnight, came the sound of a violin, and a sweet young voice singing the self-same words to the self-same tender air, the song written by his dead and gone brother 40 years before.

The effect on Michael Fray was electrical. For a moment he staggered, but caught at the keyboard before him and held it with a convulsive grasp.

"Am I dreaming? or are my senses leaving me? Poor Dick's Christmas carol; and I could almost swear the voice is my own lost Nellie's. Can this be death at last? And are the angels welcoming me home with the song I love so dearly? No, surely; either I am going mad, or that is a real living voice! But whose—whose? Heaven help me to find out!" And with his whole frame quivering with excitement—with-out pausing even to close the organ, or to extinguish his flickering candle—the old man groped his way down the narrow winding stair which led to the street, and hurriedly closing the door behind him, stepped forth bareheaded into the snowy night.

For some hours before Michael Fray was startled, as we have related, by the mysterious echo of his brother's song, an old man and a young girl had been making their way citywards from the southeastern side of London. Both walked wearily, as though they had tramped for a long distance; and once or twice the young girl wiped away a tear, though she strove hard to hide it from her companion, and forced herself to speak with a cheerfulness in

strange contrast with her sunken cheeks and footsore gait. Every now and then, in passing through the more frequented streets, they would pause; and the man, who carried the violin, would strike up some old ballad tune with a vigor and power of execution which even his frost-nipped fingers and weary limbs could not wholly destroy; while the girl, with a sweet though very sad voice, accompanied him with the appropriate words. But their attempts were miserably unproductive. In such bitter weather few who could help it would step away from their warm firesides; and those whom stern necessity kept out of doors seemed only bent on dispatching their several tasks, and to have no time or thought to expend on a couple of wandering tramps singing by the roadside. Still they toiled on, every now and then making a fresh "pitch" at some likely corner, only too often ordered to "move on" by a stern policeman. As they drew nearer to the city and the hour grew later, the passers-by became fewer and farther between, and the poor wanderers felt that it was idle even to seek for charity in those deserted, silent streets. At last the old man stopped and groaned aloud.

"What is it, grandfather dear? Don't give in now, when we have come so far. Lean on me—do; I'm hardly tired at all; and I daresay we shall do better to-morrow."

"To-morrow!" said the old man, bitterly; "to-morrow it will be too late. I don't mind hunger, and I don't mind cold; but the shame of it. The disgrace—after having struggled against it all these years—to come to the workhouse at last! It isn't for myself I mind—beggars mustn't be choosers; and, I daresay, better men than I have slept in a casual ward; but you, my tender little Lily. The thought breaks my heart! it kills me!" And the old man sobbed aloud.

"Dear grandfather, you are always thinking of me, and never of yourself. What does it matter, after all? It's only the name of the thing. I'm sure I don't mind it one bit." The shudder of horror which passed over the girl's frame gave the lie to her pious falsehood. "I daresay it is not so very bad; and, after all, something may happen to prevent it even now!"

"What can happen short of a miracle, in these deserted streets?"

"Well, let us hope for the miracle, then, dear. God has never quite deserted us in our deepest troubles, and I don't believe He will forsake us now!"

As she spoke she drew her thin shawl more closely round her, shivering in spite of herself under the cold blast, which seemed to receive no check from her scanty coverings. Again the pair crept on, and, passing beneath the lofty wall of St. Winifred's Church, stood beneath it for a temporary shelter from the driving wind and snow. While so standing they caught the sounds of the organ solemnly pealing within.

"Noble music," said the old man, as the final chords died away; "noble music, and a soul in the playing. That man, whoever he may be, should have a generous heart."

"Hush, grandfather," said the girl, "he is beginning to play again."

Scarcely had the music commenced, however, than the pair gazed at each other in breathless surprise.

"Lily, darling, do you hear what he is playing?" said the old man in an excited whisper.

"A strange coincidence," the girl replied. "Strange! it is more than strange! Lily darling; who could play that song?"

The melody came to an end, and all was silence. There was a moment's pause, and then, as if by a common impulse, the old man drew his bow across the strings, and the girl's sweet voice enrolled forth the second verse of the song. Scarcely had they ended, when a door opened at the foot of the church tower just beside them, and Michael Fray, bareheaded, with his scanty locks blown about by the wind, stood before them. He hurried forward and then stood still, shame-faced, bewildered. The song had called up the vision of a gallant young sailor, full of life and health, as Michael had seen his brother for the last time on the day when he sailed on his fatal voyage. He had hurried forth, forgetting the years that had passed, full of tender memories of happy boyish days, to find, alas! only a couple of wandering beggars, singing for bread.

"I beg your pardon," he said, striving vainly to master his emotions; "you sang a song just now which—which a song which was a favorite of a dear friend of mine many years ago. Will you—will you tell me where you got it?"

"By the best of all titles, sir," the old fiddler answered, drawing himself up with a touch of artistic pride; "I wrote it myself, words and music both."

"Nay, sir," said Michael, sternly; "you rob the dead. A dearly loved brother of mine wrote that song forty years ago."

"Well, upon my word," said the old fiddler, waxing wroth—"then your brother must have stolen it from me! What might this brother's name be, pray?"

"An honest name, a name I am proud to speak," said Michael, firing up in his turn; "his name was Richard Fray!"

The old street musician staggered as if he had received a blow.

"What!" he exclaimed, peering eagerly into the other's face; "then you are my brother, Michael, for I am Richard Fray!"

Half an hour later and the brothers, so long parted, so strangely brought together, were seated round a roaring fire in Michael Fray's quaint, three-cornered parlor. Michael's stores had been ransacked for warm, dry clothing for

the wanderers. Drawers long closed, yielding when opened, a sweet scent of lavender, and containing homely skirts and bodices, kept still in loving memory of little Nell, gave up their treasures for Lily's benefit, and Richard Fray's snow-sodden clothes were replaced by Michael's choicest coat and softest slippers. The wanderers had done full justice to a plentiful meal and a jug of fragrant punch now steamed upon the hob and was laid under frequent contributions, while Richard Fray told the story of thirty years' wandering, and the brothers found how it had come to pass that, each thinking the other dead, they had lived their lives, married, and buried their dear ones, being sometimes but a few miles apart, and yet as distant as though severed by the grim Divider himself. And Lily sat on a cushion at her grandfather's feet, a picture of quiet happiness, and sang sweet songs to please the two old men, while Michael lovingly traced in her soft features, fanciful likenesses to his lost Nellie, the strange similarity of the sweet voice aiding the tender illusion. And surely no happier family party was gathered together in all England, on that Christmas morn, than that little group round Michael Fray's quiet fireside.

"Well, grandfather, dear," said Lily, after a pause, "won't you believe in miracles now?"

"My darling," said the old man, with his voice broken with emotion, "God forgive me for having ever doubted Him."—*London Society*.

Tracking Crime with the Microscope.

H. C. Hyde, President of the California Microscopical Society, in a paper recently read before the society, on the subject of "The Microscope in Medical Jurisprudence," mentions the following cases in which the microscope aided in the detection of the criminal.

Some years ago there was a case of child-murder in France. The child had been killed by cutting its throat, and a knife supposed to have been used in the commission of the deed, was found in the possession of the accused. A careful examination showed what were believed to be blood stains, in a crevice between the blade and handle, which had been overlooked in the cleansing process which the knife had gone through, and the substance was submitted to an able microscopist, who, after a thorough investigation declared that the substance was human blood; that it was blood from the region of the throat—this fact determined by the presence of the epithelial scales peculiar to the fauces, and, furthermore, there were found fragments of rabbit fur. This array of facts was conclusive of the use of that knife in cutting the throat of the murdered child—the additional circumstance being elicited that at the time of the killing the child had a rabbit-fur tippet about its neck. Confronted with these discoveries, the prisoner confessed her guilt (this unnatural monster was a woman) and was executed.

Another case, which I have met somewhere in my reading, but cannot now recall all the facts, was where the accused attempted to prove an alibi, and would have been successful, but for the fact that his boots were covered with a whitish mud, and it occurred to the authorities to have this examined by a competent microscopist. The examination showed that the whitish mud was diatomaceous earth, and absolutely identical in its contained forms with a deposit close to the spot where the crime had been committed. This conclusively disproved the alibi; at least, so far as the boots were concerned. The general result of the case I have forgotten.

BUY A HOME.—Hon. Geo. Barstow gave some good advice in a recent speech in this city on the subject of "Home." He said: Every man should own his home, if he can. That philosophy which tells a man to drift on over the ocean of this uncertain life, without a home of his own is wrong. The man who does not own his home is like a ship out in the open sea—at the hazard of the storm. A man who owns his home is like a ship that has arrived in port, and is moored in a safe harbor. One man should no more be content to live in another's man's house—if he can build one of his own—than one bird should take the risk of hatching in another bird's nest; and, for my own part, I would rather be able to own a cottage than to hire a palace. I would say to every man, buy a home, if you can, and own it. If a windfall has come to you, buy a home with it. If you have laid up money enough by toil, buy a home. If you have made money in stocks, buy a home. Do not let anybody tempt you to put all your winnings back into the pool. Take out enough to buy a home, and buy it. Put the rest back if you will. Gamble on it, if you must; but buy the home first. Buy it, and sell it not. Then the roses that bloom there are yours; the eleanis and jasmine that climb upon the porch belong to you. You have planted them and seen them grow. When you are at work upon them, you are working for yourselves, not for others. If there be children there, then there are flowers within the house and without. Buy a home.

HER ROSE GARDEN.—In order to make room for appropriate Christmas matter, we are forced to lay over for a week the continuation of Mr. Shinn's entertaining and instructive floricultural narrative.

To Get the Most Out of Life.

Rev. O. B. Frothingham has an article on this subject in the *Herald of Health*, from which we quote paragraphs of excellent counsel:

Length of days is still one of the criteria of a good life, for it implies temperance, frugality, continence, regard for the conditions of prosperity. Is one desirous of obtaining this blessing? Then must he practice moderation in pleasure, cultivate the virtues of prudence and obedience, cherish simplicity, abstain from enervating vices, avoid unseemly violence, repress anarchical and tempestuous dispositions. He must study peace and good will, and thus substitute economy of force for waste, encouraging the powers that build up. Reason reinforces, passion squanders, vice destroys. To escape wear and tear is wisdom; but to escape wear and tear lays a duty on conscience and soul which the foolish cannot understand. Longevity implies material ease and comfort, admitting reasonable contentment, easy social relations, circumstances that do not rasp or fret, and to create these it is necessary that impulse should be submitted to judgment, and that reflection should be strong enough to subordinate desire.

The next condition on which the most is to be extracted from the world is that our days on earth be not only long, but happy. Freedom from misery, from sickness, perplexity, heartache and corroding care, is a condition of successful life. A miserable life cannot by any stretch of interpretation be called well used life, for misery means waste, dissatisfaction, discord. How does one make himself happy? Not by putting himself out of tune with himself and his circumstances, not by running the risk of misfortune, jeopardizing his chances of felicity. The hero may do this; the philanthropist may do it; the reformer; but these do not seek happiness. They are exceptions to the rule. We must not pitch our doctrine on the heroic key. We may be simple, lowly, wise, and say frankly the aim is to make life happy. Hence it has become a trite saying, that the people who wish to make the most of life, must practice the old childlike virtues of sincerity, veracity, consideration, kindness. They must not think of themselves first, but must be willing to believe that they can learn as well as teach, that the right to be served must be balanced by the zeal to serve.

Yet a third condition for getting the utmost out of life is, that life shall be harmless. I do not contend that it should be noble, great, magnanimous, or even conspicuously useful. But how not to harm the world; that is a simple thing. Do not cheat; do not lie; do not betray; do not undermine the physical or moral health; do not make light of social advantages; do not fly in the face of immutable facts; do not impugn the established principles of rectitude; do not make war on institutions that will yield to the power of reason; throw no stumbling block in the way of your neighbor, but open paths as far as you can; multiply opportunities; increase privileges; make it worth while for people with whom you associate to say and think pleasant things of you. Thus, at least, you do no harm—if you do not directly diminish the bulk of evil, you sustain the mass of good; you are conservative of the best; you belong to the salt of the earth; you are a pillar of strength. The least that can be required of any rational being is that he shall live a harmless, an innocent life, as far as he can.

CHAIR TIDIES.—Even the despised tidy has its use, and an indispensable one in protecting the back of chairs where the head rests from the soil and wear of the hair, but housekeepers should see that tidies are made of material pleasant to the touch, and the eye, of linen, cool and smooth to the cheek, not tufted wool-work or raised crochet, which leaves its imprint on the face if you turn your head. Above all, these should be well-fastened, so that it is impossible for them to slip. Not with pins, which catch the hair, but with secure stitches which can be ripped when the tidy is washed. Long pieces of linen are embroidered in colors to throw over the backs of easy chairs, to protect furniture or cover defaced cushions. A pretty chair cover of frequent design and easy to follow, is of crash, with border of two rows of black ribbon velvet, an inch and a half wide, and a band of cardinal or claret, the same width. *—Toledo Blade.*

FISH AS BRAIN FOOD.—For the schoolmaster—whale. For the pupils—blubber. For the critic—carp. For the soldier—sword-fish and pike. For the office seeker—plaice. For a house painter—graining. For a shoemaker—sole. For a carpenter—saw-fish. For a smoker—pipe-fish and whiff. For the idiots who cross the ocean in small boats—doree. For a blacksmith—bellows-fish. For lean persons—chub. For a sculptor—sculpin, of course. For a Limburger cheese manufacturer—smelt. For the basso singer of a minstrel troupe—black bass. For a sea captain—skipper. For persons who patronize lotteries—gudgeons. For dwarfs—minnows. Then there is the archer-fish for archers, the drum-fish for drummers, the pilot-fish for pilots, the skate for skaters, and the hound-fish for hunters.

A MAN OF METAL.—An exchange says with four metallic qualifications a man may be pretty sure of success in the world. These are gold in his pocket, silver in his tongue, brass in his face, and iron in his heart.



THE CHRISTMAS TREE.

Christmas is coming, oh, oh, and ho, ho!
Now bring on your holly, and do not move slow;
We'll deck the whole house with the branches so green,
In wall and on picture the leaves shall be seen.

Oh! merry the time when we all meet together
In spite of the cold, and the wind and the weather;
When grandparents, uncles and cousins we see
All gathered around the evergreen tree.

It stands in the hall, that bright Christmas tree;
And very nice fruit it will bear, you'd agree,
Could you look on the turkeys and puddings and pies
That on Christmas Day feast—something more than our eyes.

The poor and the needy, they come to our door,
And carry off with them a bountiful store
Of all the good things that we have for ourselves,
In cupboard and cellar, on tables and shelves.

When dinner is ended, what sound do we hear
From the holly-decked parlor ring merry and clear?
'Tis Uncle Tim's fiddle! The tune is a call
To all the good people to come to our ball.

They come old and young, and partake the good cheer,
For Christmas dawns on us but once in a year;
Then hand up the holly, and let us prepare
The house for the frolic in which we must share.

Young Folks' Column.

Story of a Greedy Cock.

Once upon a time, a little cock and hen went to the nut-mountain in search of nuts.

The hen said, "Now, my dear, when you find one, do not eat it all by yourself, but give me half, and I'll do the same by you."

The little cock made no reply, but chuckled as if he had his own opinion about that. Presently spying a good, big nut, he cast one eye towards the hen, who was busily scratching, and thought, "Now's my chance; she'll never know," and he gobbled it up in the greatest haste. But alas! being very big, it stuck fast in his throat.

In great agony he fell back, and holding up his claws, gasped out, "O, my dear little hen, —water—water! I shall choke!"

Off flew the hen, half distracted, to the brook, and filling a nut-shell with water, back she ran to the mountain, but imagine her dismay when she found the poor dear little cock was dead!

In her grief she cackled so loud that all the neighbors heard, and came from far and near to condole with her, for the cock had been a general favorite.

Four small field-mice brought a funeral-car, and laid him on it in great state.

Scarcely, however, had the procession started on its melancholy way, when a fox came sneaking out of the woods.

"Where are you going, little hen?" he cried. "To bury the poor dear little cock," sobbed the hen.

"Allow me to save you that trouble!" and seizing the cock from the car he gobbled him up, right before their very eyes, before anybody could say a word.

"Alack and alas!" cackled the wretched little hen. "If I could only die, too!"

"Nothing easier!" said the fox, and snapped her up in a twinkling.

At this the mice, frightened out of their wits, turned and were scampering away, when the fox caught them, car and all, and would have swallowed them whole, but the car stuck in his throat, and so he was killed too.

Thus, you see, cock, hen, mice and fox, all came to a tragic end, just on account of one greedy little rooster, who, if he had divided his treasure with his patient little wife, might be lustily crowing at this very minute, up on the nut-mountain.

TEMPERANCE BIRD.—Mary More has a pet canary-bird, which has been trained to many pretty ways. Every day at meal-times, Mary opens the cage-door, and Dick flies out and lights upon her shoulder, and expects a taste of everything she eats. One day Mary was ill and faint. The doctor ordered brandy and water to revive her; and when she tasted it Dick, as usual, called for his share. He laid his head against her face, peeped and coaxed, till, just for fun, she held up the spoon to his beak. But no sooner had Dick tasted the brandy than he flew into a violent passion, shook his head, stamped his feet, and beat his wings, scolding sharply all the time. Then, in disgust, he flew back into his cage, and would neither come out nor notice Mary again all day.

ANOTHER BOY'S COMPOSITION.—The house that I live in is made of redwood boards, shakes, scantlings, beams and iron nails. It is situated in the City of Santa Cruz, on a lot. I and my mother live in it. The house contains six rooms, and in these rooms are different articles to sustain life and to add to our comfort, such as food, clothes, beds, chairs, tables, stoves, books, papers and cooking utensils. The house is near the railroad. It is not on a St., but on a lot as I told you before. It is a square house, and it looks like a dry goods box with doors and win-

dows cut in the sides. The roof looks as if it had been smashed in by something falling on top of it. Father says that he is going to raise the roof some time, then he will finish off the upstairs. He built it all alone.

GOOD HEALTH.

HOW DIPHTHERIA WAS SPREAD.—A few weeks ago a little girl in St. Albans, who had just recovered from diphtheria, was taken by her parents to visit a family in a neighboring town. She slept with the children in that family, and shortly afterward three or four of them were taken with the malady, and some have since died. The family permitted relatives and neighbors to visit them, and the result is several cases in the neighborhood. They had public funerals, even keeping the remains of one child an unusual time, waiting for another to die, so as to bury them together; and this also spread the contagion. The physician was not powerfully impressed—as some physicians are not—with the contagious character of the disease; therefore, he did not take the necessary precautions for the protection of the neighborhood or of his own family, and the result is that one of his own children has died and another is dangerously ill. A lady who went to one of these houses to robe the victims for the grave has called at houses in the vicinity where there are children, without any change of her garments or any attempt at disinfection, and has fondled the children in those families, apparently in utter ignorance of the danger to which she was exposing them. *—St. Albans (Vt.) Messenger.*

POULTICES.—The common practice in making poultices of mixing the linseed-meal with hot water, and applying them directly to the skin, is quite wrong, because, if we do not wish to burn the patient, we must wait until a great portion of the heat has been lost. The proper method is to take a flannel bag (the size of the poultice required), to fill this with the linseed poultice as hot as it can possibly be made, and to put between this and the skin a second piece of flannel, so that there shall be at least two thicknesses of flannel between the skin and the poultice itself. Above the poultice should be placed more flannel, or a piece of cotton wool, to prevent it from getting cold. By this method we are able to apply the linseed-meal boiling hot, without burning the patient, and the heat, gradually diffusing through the flannel affords a grateful sense of relief which cannot be obtained by any other means. There are few ways in which such marked relief is given to abdominal pain as by the application of a poultice in this manner. *—Dr. T. Lauder Brunton, in Brain.*

THE SANITARY EFFECT OF HOUSEWORK UPON WOMEN.—Many of the ills and diseases prevalent among women in our day are, no doubt, traceable to the sedentary mode of life so common among them. The progress with much of the household drudgery to which women were formerly subjected, and the result is, in too many cases, want of sufficient occupation for needed bodily exercise. The fruits of this state of things are strikingly exhibited in certain observations made by the late Mr. Robertson, a Manchester surgeon, who, in his practice as a specialist for women's diseases, found that in women who themselves performed all their work there was no trace of certain complaints; that these complaints begin to make their appearance in women with one servant, become more pronounced in women who have two servants, or worse still with those who have three servants, and so on. He showed statistically that the deaths from childbirth were four times greater in the case of women with four servants than those with none. *—Popular Science Monthly.*

DOMESTIC ECONOMY.

NEW METHOD OF FRUIT PRESERVING.—There appears to be no end to the long list of valuable properties with which salicylic acid is to be credited. The latest testimonials in its favor relate to its power of preserving fruit. The process as described by M. A. dal Piaz, of Klostermenburg, near Vienna, is extremely simple, and consists in laying the fruit in jars of syrup containing a small percentage of the acid. The proportions recommended are two or three grammes of salicylic acid and 100 to 500 grammes of sugar to a liter of water. No boiling or cooking of any kind is required. Berries and stone-fruit of all sorts thus treated will keep good for months together, or even years, without the slightest approach to fermentation, even when the vessels containing them are but insecurely covered, and will preserve their natural aroma unaltered. Boiled fruit-juices will keep equally well with the addition of one gramme of the acid to every two pounds of the juice, and with such addition the color of the latter is not altered in the cooking. The only precaution needed is to secure pure crystallized acid of the finest kind, for the inferior varieties impart an unpleasant flavor to the fruit.

UTILIZE THE LIMES WHILE THEY ARE CHEAP.

—I have experimented with a view of harvesting a supply of lime juice while the limes are in their prime and cheap. I find that one part lime juice to two parts of honey forms a compound that will keep, if bottled and sealed. When diluted to suit the taste it forms a very pleasant drink, and is useful in a hundred different ways (more or less) for culinary purposes. It is much more convenient when prepared thus, than to have to press out the juice every time one wants a cooling drink. Some people whose tastes are averse to honey would prefer sugar; at all events we would suggest to all who are fond of acid drinks to harvest a supply of this material for this delicious and healthful drink. *—Cor. Riverside Press.*

CRANBERRY SAUCE.—After removing all soft berries, wash thoroughly, place for about two minutes in scalding water, remove, and to every pound of fruit add three-quarters of a pound of granulated sugar and a half pint of water; stew together over a moderate but steady fire. Be careful to cover and not to stir the fruit, but occasionally shake the vessel or apply a gentler heat if in any danger of sticking or burning. If attention to these particulars be given, the berries will retain their shape to a considerable extent, which adds greatly to their appearance on the table. Boil from five to seven minutes, remove from fire, turn into a deep dish and set aside to cool. If to be kept they can be put up at once in air-tight jars.

RYE BREAD.—Take one pint of rye flour, one-half pint corn meal, one-half pint wheat flour, one teaspoonful sugar, one teaspoonful salt, two teaspoonfuls baking powder, one spoon shortening and one pint sweet milk. Mix all the ingredients together except the lard, and sift. Rub in the lard cold very thoroughly after sifting the flour, then add the milk and mix into a smooth batter, and bake in a narrow, oblong tin pan 50 minutes in a moderate oven. Protect the loaf with paper the first 25 minutes. When done put a piece of butter the size of a walnut, in a muslin cloth, and rub all over the loaf. Eat with sweet butter and a good cup of coffee, and be happy.

ALMOND PUDDING.—Put six ounces of sweet almonds pounded fine into a pint and a half of milk, and let it come to a boil. In the meantime mix well three ounces melted butter with three ounces of flour, stir it into the boiling milk and let it cook till it comes to a stiff batter and readily cleaves from the edge of the saucepan. When slightly cool add three ounces fino sugar, the yolks of eight eggs and the whites beaten to a stiff froth. Bake half an hour, turn it out and sift sugar on the top. It should be baked in a deep dish, as it rises very much, and must be served as soon as it comes from the oven.

SOUTHERN FRIED CHICKEN.—Put one pint of cream into a frying pan large enough to hold a chicken, and set it over a moderate fire until it begins to color; then lay into it one chicken, nicely dressed and cut in joints, and fry until the under side is nicely browned; when the cream acquires a rich brown hue dip enough to serve as sauce for the dish and set it aside to keep hot. Season the chicken with pepper and salt and turn it over in the pan. Let it brown equally all over. Do not let the cream burn. When done lay it upon a flat dish and pour the cream into the center.

RUSK.—Beat three eggs thoroughly, then beat in a cupful of sugar, and a little flavoring, to taste, of lemon or nutmeg. Add a tumbler and a half of rich cream which has first been mixed with a little flour; use no more flour than will give it consistency enough to be molded. Let it rise all night or all day, and when very light put it upon tins to rise again before baking. Bake in a quick oven 15 or 20 minutes.



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The Week.

Those who need a chill to lead them to appreciate Christmas cheer, need not envy their Eastern friends this year, for we have had touches of winter which are simply sufficient or present needs. It is true that nothing we have had would bear comparison to orthodox, historic Christmas weather, but there has been enough to make warm fires a delight and heavy blankets light. And then, there has been ice, and the Californian has shown his neighbor a quarter of an inch on the surface of an outstanding pail, as interestedly as the Eastern boy turns the pail over and shows solid ice from top to bottom. It has been a period of unusual cold; even sunny Los Angeles has told of ice bright, shining, hard and cold.

What will the cold bring, is the question? Some say it will be followed by oceans of rain; some say by continued drouth. He is wisest who says nothing. Meantime, let the doubts and misgivings discomfort themselves. Clear up the countenance and let free the smiles for the holiday rejoicings. It will be time enough to mourn when the evil days come; now let genial Christmas influences pervade the heart and home.

The Constitutional Convention.

The Constitutional Convention at Sacramento continues its labors from day to day and week to week. The usual amount of talk which pertains to all popular bodies has to be gone through with, and this consumes time in wholesale quantities. But though talk is the foe of speed, it seems to be the friend of truth, because gradually the leading topics which have come before the Convention are being shorn of extravagant and impossible features, and there is reason to hope that the result will be the affirmation of principles and methods which all fair-minded people can approve.

On the Chinese question, the Convention has taken a very temperate, and yet a decided stand, and this we think will avail more against the evil than any radical and impossible proposition could avail. The Convention has taken a place with reference to the Chinese which is believed to be tenable. It has decided against farther immigration; it has ruled against the employment of Chinamen in any work of the State; it has affirmed the right of cities and towns to order the residence of the undesirable element where they will, and thus the evil of contact is much reduced. More than this, the Convention has unanimously adopted a stirring memorial to Congress, which must have some weight in securing proper national legislation on the subject.

On the subject of taxation there is still much work to be done in the Convention, but enough has already been done to bring some assurance to the agricultural classes. That absurd wrong, the taxation of growing crops, has been put down from the first.

The Committee on Corporations, other than municipal, is one in whose work much interest centers. This committee has done much hard work, and deserves the people's thanks. We have no space to allude to the minor items of its work, except to note that a clause has been engrafted which enables the formation of co-operative companies for agricultural, manufacturing and other purposes, and thus opens the way for a system of co-operation which is now gaining ground in this State.

Perhaps the most important item of the committee's work is in measures to regulate the management of railways, and for the reformation of certain wrongs of which complaint is now general. As this subject is of much interest to our readers in the different parts of the State, we quote the substance of one section relating to the proposed control of railroad corporations, as follows:

"The State shall be divided into three districts as nearly equal in population as practicable, in each of which one railroad commissioner shall be elected, whose salary shall be fixed by law, and whose term of office shall be four years. Said commissioners shall not be interested in any railroad corporation, or other transportation company, as stockholder, creditor, agent, attorney, or employee; and the act of a majority of said commissioners shall be deemed the act of said commission. Said commissioners shall have the power, and it shall be their duty, to establish rates of charges for the transportation of passengers and freight by railroad or other transportation companies, and publish the same from time to time, with such changes as they may make; to examine the books, records and papers of all railroad and other transportation companies, and for this purpose they shall have process of the courts; to hear and determine complaints against railroad and other transportation companies, to send for persons and papers, to administer oaths, take testimony, and punish for contempt of their orders and processes, in the same manner and to the same extent as courts of record, and enforce their decisions and correct abuses through the medium of the courts. Said commissioners shall prescribe a uniform system of accounts to be kept by all such corporations and companies, and they shall keep their accounts according to such system. Any railroad corporation or transportation company which shall fail or refuse to conform to such rates as shall be established by such commissioners, or shall charge rates in excess thereof, or shall fail to keep their accounts in accordance with the system prescribed by the commission, shall be fined not exceeding \$20,000 for each offense, and every officer, agent, or employee of any such corporation or company, who shall demand or receive rates in excess thereof, or who shall in any manner violate the provisions of this section, shall be fined not exceeding \$5,000 or be imprisoned in the county jail not exceeding one year. In all controversies, civil or criminal, the rates of fares and freights established by said commission shall be deemed conclusively just and reasonable, and in any action against such corporation or company for damages sustained by charging excessive rates, the plaintiff, in addition to the actual damage, may, in the discretion of the Judge or jury, recover exemplary damages. Said commission

shall report to the Governor, annually, their proceedings, and such other facts as may be deemed important. Nothing in this section shall prevent individuals from maintaining actions against any of such companies."

Growing Basket Willow.

EDITORS PRESS:—Can you inform me if there is a work published on the cultivation of basket willow and its manufacture into baskets? Is it raised in California? If so, where and when manufactured into baskets? Please answer through the PRESS.—G. B. ADAMS, San Gabriel, Los Angeles Co.

We are under the impression that pamphlets have been published on the growth of the osier willow, but we cannot now trace them. There may perhaps be something found on the culture in the "Agricultural Reports." We can best serve present purposes perhaps by giving such points as we have in mind, as we have been acquainted with the growth on Eastern farms. The osier has been introduced in this State, but to what extent its culture has been carried we do not know. Considerable quantities are used by the basket makers in this city, and they have also imported the cuttings with a view of producing their own supplies. It would be a question as to what extent the crop can be carried with profit, for our demand for wicker ware must be limited, and the supply of raw material might soon be over large.

Osier culture is not difficult, and large returns have sometimes been gained from it at the East. The soil for it should be rich, deep and low; places which grow fresh water marsh grasses would generally be favorable. The ground should be prepared as for any other crop, being left as light as possible to facilitate the sticking of the cuttings, which should be eight or nine inches long, and are cut from the canes beginning at the butt and cutting up as long as the cane is strong enough to bear being pushed into the ground.

The two varieties most in use are French Purple osier and the Kentucky Green. The former is used for fine work and the latter for heavier. The cuttings should be stuck in rows three feet apart, and should be clear down so that you can see only the end or very little of the tip. Care should be taken to stick them as they grow, buds up, but this is not essential. Cultivate them twice or three times the first year, and if the weeds are very bad between the cuttings, pull them out by hand. They will raise from one to four little canes three or four feet high the first year, which must be cut off, leaving only an inch stub. The cutting should be done with a sharp knife and as carefully as possible where the soil is loose, so as not to break the rootlets. In the East they cut when the ground is frozen hard. The first years cuttings are not worth marketing.

The second year cultivate the same, but be careful of the new canes, as they are very tender, and if you bruise one it will grow branching and be worthless. The second year's harvest is quite valuable, paying back more than half the expense you have been to.

The harvest consists in carefully cutting them as close down as you can, so that the hills will not get stumpy, as soon as the leaves are all down. Make the bundles about a foot through, binding with the poorest canes, and haul to your place of peeling, where you must have a tank made of galvanized iron set in an arch about four feet wide and about twice as long as your bundles. Fill this tank about a third full of water, bring it to boil, then fill up with your bundles, put on your lid and fasten it down tightly. Generally an hour is long enough to boil—you can tell by trying; pull out a wand, and if you can easily break the skin with the thumb nail and then strip it off, it is all right. Take them out and fill up again. Pile the boiled ones tightly under some cover where the wind cannot get at them, and as you begin to peel throw the bark on to your growing pile until it is a foot or two deep, and they may lie there all winter if you like, and peel just as easily as when they came out of the tank. The peeling is done by two nibs of iron, six inches long and half an inch through, and held together just like sheep-shears. There are also machines for peeling driven by steam power.

MANY interesting discoveries are announced by the American naturalist, Morse, now in Japanese government service, and commissioned to make scientific investigations throughout the empire.

QUERIES AND REPLIES.

Seedless Sultana Grapes.

EDITORS PRESS:—Last spring, a year ago, I grafted a number of white and black Zante currants, also seedless Sultana. The black Zante currant are, with me, an entire failure; what little fruit they bear is not perfectly seeded. The white variety does better, but mildewed badly this year. The seedless Sultana, it seems to me, will beat all the Zante currants together, making splendid small raisins.—WM. PFEFFER, San Jose.

This favorable experience with the Sultana quite accords with what we have heard from other growers. We received during the week a box of handsome cured Sultanas from W. B. West, of Stockton, the well-known importer of desirable foreign plants. These small raisins were found to be practically seedless and of splendid appearance and flavor. We see no reason why they should not quickly supplant the objectionable Zante currants, which are imported into this country, and thus make a good market for themselves and profit for their growers. We are informed that Bowen Brothers, one of our most enterprising grocery firms, have taken hold of Mr. West's Sultana's and will push them in their trade as their excellence warrants. Mr. West has propagated his Sultana vines with a view to supply the demands of planters, and assured us that he put no fancy price upon them, but sells them at the general prices for vines. We should like to see the Sultana more widely tried, and to hear reports of experience with it.

How to Kill Stumps.

EDITORS PRESS:—In answer to Mr. Meredith's question in last week's PRESS, "How can I kill a live oak stump?" I can tell him the process by which I killed several black locusts in my garden in Sacramento in 1868, which had been planted in 1852. Many of them were a foot in diameter, and proportionately tall. They shaded too much ground, and for a distance of thirty feet around each tree they would send up shoots wherever their roots were injured by the spade. I caused them to be cut down within three feet of the ground. I then, with an inch and a-half auger, caused a hole to be bored down through the center of each stump a distance of three feet. This hole was filled with common salt, and then tightly plugged with a piece of pine. This killed the stump and roots to the farthest spongole. I know that the black oak (*Quercus chrysolepis*) is very tenacious of life, but perhaps not more so than the locust (*Robinia pseudacacia*). Mr. Meredith can try the experiment on the oak, and report the result. I think it will be effectual. Possibly it may turn out like the patent medicine which an Eastern man evolved from his inner consciousness, and of the effects of which on his patients he proposed to keep a record. He first gave it to a butcher, who got well. He made the record, "Cures butchers." The next was a tailor, who died, and the faithful entry said, "Kills tailors." However it may result on oaks, my medicine will cost but a trifle.—B. B. R., San Francisco.

Another Dose for Stumps.

EDITORS PRESS:—In your issue of December 14th Mr. Meredith, of Nordhoff, asks some questions, and one is, how he can kill live-oak stumps. I will tell him of a plan that I think will work. I know that it will with other oaks, and I think it will do as well with live-oak. Take a 1½-inch auger and bore a hole in the top of the stump, say 5 or 6 inches deep, and fill up with a strong solution of copperas or saltpeter (either one will do), then plug the hole up tight. If it is a very large stump it may require the second dose after about 3 months. Ten cents' worth of coal oil poured in the hole, and a match applied, will burn it out, so that it will never be any more trouble.—J. E. FOSTER, Saratoga, Cal.

FRAUDS IN TREE SELLING.—Tree buyers and planters will do well to heed the lessons of observation and experience as told by Mr. Owen in our "Horticulture" department and by the extract from the *Willamette Farmer* in our "Agricultural Notes." There is a precious gang of swindlers at work on this coast selling to the unwary the most worthless trees under the most desirable and attractive names. These men operate under different names each year, and the only way to get even with them is to refuse to patronize all non-accredited treesellers, as our correspondent suggests. There is no more abominable swindle than these men perpetrate all over the country. We have given warning against these frauds before, and we hope the statements made in this issue will put all readers on their guard.

A SATISFACTORY understanding is said to have been arrived at between the Pacific Mail Company and the railroads.

What About a Free Library.

We have a grand, growing city; a city destined to attain a population and commanding importance commensurate with the growth of our favored western coast. It is time now to lay foundations broad and deep which shall determine the character and quality of the superstructure which shall be reared upon them. Passing over the important matters of increasing trade, and providing facilities for its transaction in the time when it shall far outstrip its present dimensions, we come at once to the point we would make, and that is, provision for the intellectual growth of our people. We speak not of schools, but rather of a grand repository of available knowledge, instruction and entertainment which a grand free library shall furnish to our coming hundreds of thousands. Is it not time now that the foundation for this library should be laid, and the enterprise pushed forward with united zeal and combined interest among all friends of the true progress of our people? Is there not in this matter a principle and a promise involved which should lead us to rise above personal feelings, to accept a sacred trust which we owe to the rising generation to execute? Is there not a broad duty in this project for a grand free library which all friends of progress should assume.

It seems now that there is a proposition pending, which shall decide the course of the Mechanics' Institute with reference to the building up of a free library, as authorized by the last Legislature. If the Institute should decide not to ally its interests with the free library movement, will not the latter go forward enthusiastically by others' aid, and will it not be difficult to maintain a list of subscribing members when the free library is well in operation? And could not the Institute, by giving over its library enterprise to the trustees of the free library, go forward more rapidly in other works which are in its legitimate sphere? Could it not develop more fully the lyceum features, and thus contribute to the education and high entertainment of the people in a way which is now made of secondary importance? Could it not develop features for the encouragement of the fine arts, for the elevation of the mechanic arts, and for the free instruction of apprentices in directions which are not now open to them, but which would elevate their workmanship, their manhood and their citizenship?

It seems to us that some action of this kind could be taken with advantage to the grand work of the Institute, and as a splendid contribution to the progress of the free library project. Out of 11 trustees of the free library, 5 may be appointed by the Institute, and would not this be ample assurance that the work which the Institute has already accomplished in its library should not be permitted to fall to the ground, but would be used as a stepping-stone to still grander achievement for the benefit of the whole people. This is an important matter; we hope wisdom may guide the final determination.

The Rural Handbook of Horticulture.

Dewey & Co., the publishers of the RURAL PRESS, are now engaged upon, and will soon publish, a work under the above title, written for them by Charles H. Shinn, of Niles. They have purchased the author's rights, and have stereotyped the book, so as to supply what they believe will be a large demand.

This book is devoted to the horticultural interests of the Pacific States, and treats of orchards, gardens, lawns, irrigation, seed-planting, vegetables, forest and shade trees, shrubs, and similar topics of universal interest, all handled in Mr. Shinn's well-known vivid style. The book also contains a number of carefully prepared and valuable "Tables of Plants Adapted to our Climate," and a most copious index. No work of the kind has heretofore appeared on this coast, and we think it will be found fresh, practical and original; in short, a manual of great value.

We call attention to the advertisement of this work in another column, which contains a list of some chapters and headings, with other information about the work.

It is said that Senator Jones proposes to spend several thousand dollars in sinking an artesian well for the benefit of the Santa Mountains.

Harlan's Buzzard.

Our engraving shows Harlan's buzzard which was added to the fauna of the United States by Mr. Audubon about the year 1830, and by him called after Dr. Richard Harlan, of Philadelphia. He speaks of two specimens only, which were captured in Louisiana. They had hied in the neighborhood of the place where found for two seasons, but their nests were not seen. Their young are said to appear of a leaden-gray color at a distance, but to become as dark as the adult birds at the approach of winter. These birds were successively seen perched on the top of a high tree, standing in an erect attitude, and appeared so like the black-hawk (*Falco niger*) of Wilson, as to be at first taken for it. They were hard to approach, and when severely wounded and captured they proved fierce, courageous and intractable, and died refusing food. They were considerably smaller than the red-tailed hawk, to which they are al-



HARLAN'S BUZZARD.

lied, but superior in daring; their flight is rapid, protracted, and so powerful as to enable them to seize their prey with apparent ease, or to effect their escape from the red-tailed hawk, which pursues them on all occasions. They have not been observed to fall on hares or squirrels, but at all times evince great fondness for common poultry, partridges, and the smaller species of wild ducks.

PACIFIC COAST POSTAL CHANGES.—The following are reported for the week ending December 14th: Offices discontinued—Workman, Los Angeles county, California. Postmasters Appointed—Gilbert Lamphere, Berryville, Siskiyou county; Hiram Shartzer, Highland Springs, Lake county; W. M. Tucker, Leesville, Colusa county; Silas R. Lewis, Orland, Colusa county; Abbott Richardson, Sheep Ranch, Calaveras county, California; Livingstone Vance, Wilderville, Josephine county, Oregon; Miss Maggie Patterson, Safford, Pima county, Arizona.

EIGHT regiments of Afghans, at Cabul, have shown a disinclination to fight.

The Standard Soap Works.

Our attention was first called to this meritorious undertaking by the exhibit of the Standard Soap Company at the recent fair. We were glad lately to have had the opportunity of examining their new works at Berkeley. It is generally supposed that a soap factory is the most disagreeable of all places in the world; this had been our experience, and we were agreeably surprised in finding a very different state of things at the works at Berkeley. The establishment consists of a large and handsome structure very strongly built of wood. The main building is 300 feet by 210 feet on the ground floor and five stories high. There is a warehouse 300 by 40 feet, and, also, a number of adjoining smaller buildings.

Besides the universal cleanliness, another noticeable feature is that there is no fire in any part of the building except in the boiler-room. All parts of the building which require heat for

actions are effected at the works at Berkeley have each a capacity of 250,000 pounds of finished soap. The price of the raw material which goes into each of these vats for each "hoil," as the operation is called, is \$5,000. This will serve to give some idea of the magnitude of the business. In most soap factories the soap is ladled out by hand. This would be a tedious operation with a charge of 250,000 pounds, and it is consequently effected by a large siphon tube, moving upon a universal joint, and so arranged that it can skim the soap completely from the layer of *niger*, or impure residue, upon which it floats. The soap is then run into large wooden molds, so as to dry and harden. When this has taken place, it is cut by strings, stamped, packed, etc. We have of necessity omitted a description of many of the devices for mixing, stamping, etc., and confine ourselves to stating that all the labor-saving devices, many of them original, that it seems could be thought of, are in use.

The boxes used for packing are all made on the spot, from lumber which arrives from Nevada, sawed and cut ready for nailing up. The soda comes from the same place, to be made into caustic soda in the works. Both of these articles are deposited right at the works by the Central Pacific railroad, which literally passes the door, and gives great facilities both for import and export of freight.

In all the arrangements for saving of labor and time, economy and quickness seem to have been equally consulted, and the whole reflects great credit upon the Superintendent, Mr. R. P. Thomas, who designed it.

The number of different varieties of soap manufactured, and the different styles in which it is got up as to color, perfume, etc., would astonish any one who is not familiar with the business. A number of novelties have been introduced by the company, such as the "Initial Soaps," in which an initial letter of a different color is formed in the soap as deep as the center; and the "Metallic Center Soap," in which a thin plate of perforated metal is placed through the length of the cake to keep it together till it all wears out. Another useful article which this company manufacture is the "Marine Salt Water" soap, which, being especially adapted to sea-going vessels, seems to find an extensive sale. But the list of soaps is too long for our space, and we must refer our readers to the office, No. 204 Sansome street, S. F., for further particulars.

The business of the firm is already quite extensive, extending throughout the Pacific slope from Alaska as far as Panama, and the South Sea Islands. The yearly output is from \$400,000 to \$500,000 worth of finished goods, and the prospect seems to be that business tact and a thorough knowledge of the technical part of the work will (deservedly) prove a paying investment.

THE PRICE EXCAVATOR.—We note with pleasure the following item in the Colusa *Sun*, of December 7th, concerning a machine which was patented through Dewey & Co.'s Agency two or three years ago. The editor of the *Sun* was engineer of the work to which reference is made. He writes: "The road commissioners, after inspecting the road recently built west of town, have accepted it and settled with the contractor. There is something over 100,000 yards of earth in the embankment. We take occasion here to say that this is the cheapest as well as the best road ever built in Colusa county. The writer of this had more to do with the details of the work than any one else and came often in contact with Mr. Burrall, (President of the California Building & Bridge Company, of Oakland,) the contracting party, who tried all the time to do exactly the right thing, though he had a very trying time of it on the earth work. Had it not been for the assistance of the Price excavators, which he used, he would have lost money on the job. They are the best invention we ever saw for moving earth." We are told that the contractor did the earthwork for nine and seven-eighths cents per cubic yard, a very low price, indeed.

It is said that the Missouri river, above the great iron bridge at Leavenworth, Kas., is rapidly cutting a new channel through the country eastward of the bridge, and that, unless arrested, in a short time the bridge, which cost nearly a million dollars, will be completely isolated and rendered useless.

BREEDERS' DIRECTORY.

PURCHASERS OF STOCK WILL FIND IN THIS DIRECTORY THE NAMES OF SOME OF THE MOST RELIABLE BREEDERS. OUR RATES.—Six lines or less inserted in this Directory at 50 cents a line per month, payable quarterly.

CATTLE.

A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 323 Front street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

SHEEP AND GOATS.

E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

L. U. SHIPPEE, Stockton, Cal. Importer and breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine.

M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

POULTRY.

WILLIAM NILES, Los Angeles, Cal. Importers and breeders of Thoroughbred Poultry. Eggs for hatching.

MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

BURBANK & MEYERS, 43 California Market, S. F. Importers and breeders of Thoroughbred Poultry, Doves, etc. Eggs for hatching. Send for price list.

SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine. Agent for Dana's Cattle, Hog and Sheep Labels.

A. J. TWOGOOD, Riverside, Cal., Importer and Breeder of Pure Bred Poland-China Hogs.

W. & J. ROBINSON, Hanford, Tulare Co., Cal., Importers and breeders of Thoroughbred Berkshire Swine and Pure Brown Leghorn Fowls. Trios a specialty.

Poultry.

THOROUGHbred POULTRY.

116 Acres

Unlimited Range.

DEVOTED TO

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Largest Yards on the Coast.

Brahmas, Leghorns, Plymouth Rocks, Bronze Turkeys, Geese, Pekin Ducks, Guinea Pigs, Etc.

Safe arrival of Fowls and Eggs Guaranteed.

Pamphlet on the care of fowls—hatching, feeding, diseases and their cure, etc., ADAPTED ESPECIALLY TO THE PACIFIC COAST. Sent for 15 cents. Send stamp for price list. Address

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EVERYBODY KNOWS

That Mrs. C. H. Sprague, at the California Poultry Yards, at Woodland, Yolo County, keeps the choicest lot and the greatest and best variety of Thoroughbred Fowls of any one west of the Mississippi river, and that one can get just what is wanted by sending orders to her.

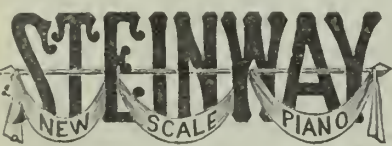
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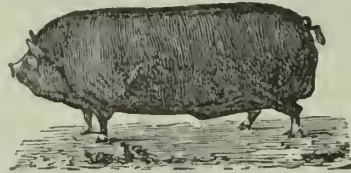
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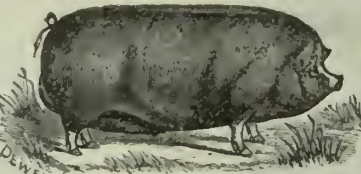
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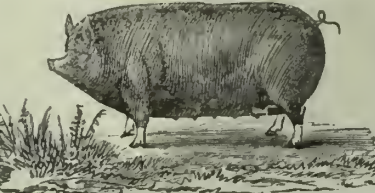
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Thoroughbred Berkshire and Poland China Swine. Light Brahma and Black Cochins Chickens for sale.

T. C. STARR.

BERKSHIRES.



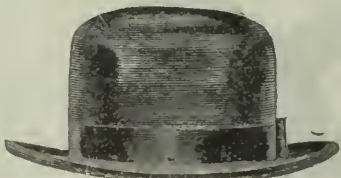
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Wholesale and retail dealers in and

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JAPANESE PERSIMMON TREES for sale at \$50 per 100; two to four feet in height.

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My Trees are Healthy, Stalky and well grown.

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Crosby's Extra Early Marblehead Mammoth Stowell's Evergreen Mexican Sweet, New } Sweet Corn.

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Delivered on board of Cars or at Express Office, at the following prices:

China Corn	10 cts per lb
White Egyptian Corn, (clean seed)	5 "
Broom Corn, com var'ty	5 "
Broom Corn, dwarf	4 "
Broom Corn, evergreen	15 "
Kennedy's Amber Cane, (in hulls)	20 "
Red Implice Cane, (clean seed)	50 "
Sorghum Cane	10 "
Penicillaria, (East India Millet), in hulls	1 00 "
Chufas, best Spanish	40 "
Artichokes	15 "
Spring Wheat, earliest, Sherman	5 "

By mail, 20 cents per pound additional.

I have also some choice, thrifty, year-old Trees, which I will deliver on cars at 25 cents each, or \$2.50 per dozen.

Oranges, from best Tahiti Seed.
Black Mulberry, large, sour-fruited, from Tennessee.
Oleanders, Giant of Battles, Double Red and Single White. Black Walnuts, native of California.

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Mission St. Opposite Woodward's Gardens,

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SEEDS OF EVERY DESCRIPTION, BULBS AND BULBOUS PLANTS, AND A GENERAL VARIETY OF GARDEN AND HOUSE PLANTS.

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Neatly put up in papers and packages with description of variety, general directions for cultivation on each paper, and bearing my name, are for sale by responsible merchants throughout the Pacific States and Territories. My stock of

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SEEDS. TREES. SEEDS.

Continually arriving, NEW and FRESH KENTUCKY BLUE GRASS, RED TOP TIMOTHY, SWEET VERNAL, MEZQUITE and other Grasses.
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Also, a Complete Assortment of HOLLAND FLOWERING BULBS, JAPAN LILIES, FRESH AUSTRALIAN BLUE GUM, or "FEVER TREE" SEED; together with all kinds of FRUIT, FOREST and ORNAMENTAL TREES, and everything in the Seed line, at the Old Stand.

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DIOSPYROS KAKI

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JAPANESE PERSIMMON.



This new and popular fruit at prices to suit the times. Nine best varieties. Also Plants of the

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210 acres of land in Orchard and Nursery. 500,000 Orange and Lemon Trees now ready for market of the best and thoroughly tested varieties, including

GAREY'S MEDITERRANEAN SWEET ORANGE

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These trees are thornless, the fruit almost seedless, early and regular bearers. These varieties have been endorsed by the Southern Horticultural Society.

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Sent post-paid on receipt of Five (5) Three (3) Cent stamps. No person should engage in Orange culture without first reading this Lecture, which treats on all the principal points.

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STRAWBERRY PLANTS

FOR SALE.

I offer for sale a large lot of strong, well-rooted plants of the

MONARCH OF THE WEST.

On my grounds the Monarch has done splendidly. The plants are strong, vigorous and healthy. The berries large, beautiful and well flavored. From two acres planted in January last, my sales netted over freight and commission, \$1,200 in less than six months.

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NILES, ALAMEDA COUNTY, CAL.

We invite attention to our large stock of

Fruit Trees and Ornamentals,

Of the most approved varieties. Also, Coffee, Cork Oak, Olives, Guavas, English and Black Walnuts, Magnolias, Loquats, Butternuts, Small Fruits, Evergreens, Etc. We have a choice stock of the Diospyros Kaki (Japanese Persimmon), of our own growing, and also, grafted stock imported direct from several Japan Nurseries. Address for catalogue and terms,

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An unusually fine stock of trees is offered for sale at lowest market rates for reliable nursery stock, comprising all the leading kinds and varieties of hardy fruits. Also a general assortment of evergreen trees and shrubs, blue gums, Monterey cypress, etc., in boxes for hedge and forest planting. My trees are grown in a sandy loam, without irrigation; can be no finer rooted trees growing, wood ripens early, and can be safely transplanted as soon as sufficient rain falls, for lifting the stock. Early planting recommended. Catalogues with list of prices ready for distribution October 1st.

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CAMELIAS, PALMS, CYPRESS, PINES, CEDARS,

RARE JAPAN AND AUSTRALIAN EVERGREENS,

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ROSES OF ALL VARIETIES,

Acacias, and Hardy Ornamental Plants.

Our Specialty, PANSIES of the finest and latest German and French varieties.

Orders carefully filled, packed and promptly forwarded at reasonable prices.

For particulars and Catalogue apply as above.

500,000 Blue Gum TREES, ETC.,


—For Sale by—

BAILEY & CO.,

OFFICE and Depot,

No. 1161 Seventh St.

Adeline St. Station, OAKLAND, Cal.



[Eucalyptus Globulus, or Blue Gum Tree.]

Cars from San Francisco Stop at Depot every Half Hour.

Also, Nursery at Berkeley, at Dwight Way Station.

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We offer for sale a large and fine stock of pure

Strawberry Plants.

"Crescent Seedling," wonderfully productive, said to have yielded 15,000 quarts to the acre. "Miners' Great Prolific," extra large, late and firm; very productive. "Cinderella" and "Continental." Figured in RURAL PRESS last season. "President Lincoln," eleven inches in circumference. "Monarch of the West," "Great American," "Prouty's Seedling," "Duchesse," "Capt. Jack," "Kerr's Prolific," "Granger," "Star of the West," "Duncan," "Cumberland Triumph," "Somer's Ruby," "Seth Boyden," "President Wilder," "Springdale," etc.

"Herstine," the most productive, "Highland Hardy," the earliest, RASPBERRIES. "Silva's Koning Claudie," the earliest and best early Blue Plum in the world. New early and late Peaches. Send for descriptive circular to

C. M. SILVA & SON,

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To Fruit Growers and NURSERYMEN!

—SEND TO—

Washburne & Reynolds, Ferndale, Humboldt County, California,

For Roots of

THE SALMON BERRY.

Easily cultivated. Larger than the Blackberry, and equal to the Strawberry in flavor. Ripens from March to June, and grows in any soil. For particulars apply as above.

ORANGES and LEMONS.

The best huddled varieties of both native and foreign Orange and sweet rind Lemon trees for sale. Prices to suit the times. For particulars address

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Semi-Tropical Nursery, Orange P. O., Los Angeles Co., Cal.

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ISAAC COLLINS offers for sale at a bargain, for cash, 3,000 or 4,000 Cherry Trees, 1 and 2 years old. Trees good size on Mazzard stocks, and of the best market kinds. Black Tartarian, Black Republican, Royal Ann, Van Skike, etc. Reference: E. Lewelling, Orchardist, San Lorenzo, Cal.

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FRUIT AND ORNAMENTAL TREES,

Evergreens, Shrubs and Greenhouse Plants,

Comprising everything NEW and RARE in my line.

SPECIALTIES:

Raisin Grapes, Figs, Oranges, Lemons,

AND OTHER TROPICAL FRUITS.

I have imported superior Figs and Raisin Grapes direct from the place of their nativity in Europe, and having propagated large quantities, can now offer them to the trade and public on the Most Reasonable Terms.

SULTANA.—A good stock of the SEEDLESS SULTANA grapevines for raisins. This is an important specialty, and will be sold at the same rates as ordinary stock.

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A large and general assortment of FRUIT AND ORNAMENTAL TREES, Evergreens, Flowering Shrubs, Roses, Greenhouse Plants, Grapevines, Small Fruits, etc. I offer for sale a large and well assorted stock. Low-topped, stately Fruit Trees a specialty. Address

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Blackberry and Cranberry Plants.

100,000 Plants of new varieties of BLACKBERRY Plants—the Early Cluster and Vina Seedling, Missouri Mammoth and Deering Seedling, the earliest and the most productive of all. I will give satisfactory proof that these berries have realized \$750 per acre. It paid more than double the amount as the old late varieties. Price by mail, \$2 per dozen, \$8 per hundred, and \$80 per thousand. Send for Catalogue. Cherry Cranberry plants for \$150 per acre, planted, not less than 10 acres in one order. We will sell to responsible parties, large orders on time, part cash.

H. NYLAND, Boulder Island, San Joaquin Co., Cal.

FOR SALE.

30,000 Kittatinny Blackberries,

Strong Plants, grown by irrigation. Also,

3,000 GENUINE ZANTE CURRANT CUTTINGS.

I. A. WILCOX, Santa Clara, Cal.

Boswell's Pure Air Heater. Cooker, Fruit and Clothes Dryer.



The Combined Heater, Cooker and Drier is a handsome piece of Black Walnut Furniture, with glass doors and lights, and exactly adapted to the wants of every family in every State of the Union, and is sold and used the year round. It is more simple of construction, more durable and ornamental than anything in the heating or cooking line now before the public, finds ready sale, and can be manufactured anywhere by workmen of ordinary intelligence. It bakes Bread, Cakes and Pies, to any desired tint, without turning or watching, and without danger of burning. No better cooking can be done. All farmers and economical housekeepers should use them. They are popular wherever introduced. See illustration and description in RURAL PRESS Oct. 26th, 1878, of different apparatus, styles and combinations, or send stamp for illustrated circulars and full description. Address,

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No. 606 Montgomery St., Sherman Block, San Francisco.

M. COOKE. R. J. COOKE.

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento

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Fruit & Packing Boxes Made to Order.

AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOK & GREGORY

PRINTERS' PROOF PRESS,

COMPLETE AND IN GOOD WORKING ORDER,

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AT THE LOW PRICE OF \$37.50.

Call and see it.

BENNETT, PATTERSON & CO.,

Manufacturers and Dealers in

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Walnut, Marble Top and Cottage Sets a Specialty.

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Grangers' Bank of California,

42 California Street,

SAN FRANCISCO CAL.

Authorized Capital - \$2,500,000,

In 25,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$405,000.

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MANAGER AND CASHIER,

ALBERT MONTPELLIER.

SECRETARY.....FRANK McMULLEN.

The Bank was opened on the first of August, 1874, for the transaction of a general banking business.

Having made arrangements with the Importers' and Traders' National Bank of N. Y., we are now prepared to buy and sell Exchange on the Atlantic States at the best market rates.

GRANGERS' Business Association.

Incorporated February 10th, 1875.

Capital Stock, - - \$1,000,000.

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Consignments of Grain, Wool, Dairy Products, Fruit, Vegetables, and other Produce solicited, and Advances made on the same. Orders for Grain and Wool Sacks, Produce, Merchandise, Farm Implements, Wagons, etc., solicited and promptly attended to.

We do a Strictly Commission Business, and place our rates of Commission upon a fair legitimate basis that will enable the country at large to transact business through us to their entire satisfaction.

Consignments to be marked "Grangers' Business Association, San Francisco." Stencils for marking will be furnished free on application.

DANIEL INMAN, Manager.

Farmers' Union, San Jose.

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H. E. HILL.....MANAGER.

W. M. GINTY.....CASHIER.

Authorized Capital - - - \$200,000.00

Paid up in Gold Coin - - - 95,000.00

Surplus - - - 23,571.87

DIRECTORS—William Erskson, L. F. Chipman, Horace Little, C. T. Settle, David Campbell, James Singleton, Thos. E. Snell, W. L. Manly, J. Q. A. Ballou.

Will do a General Mercantile Business, also, receive Deposits, on which such Interest will be allowed as may be agreed upon. Gold, Silver and Currency exchanged. Will also, on commission, make purchases and sales (at home and abroad) at low rates.

FARMERS AND OTHER CITIZENS are invited to examine our constantly large and varied stock of first-class goods, including Teas, Coffee, Groceries, Provisions, Crockery, Hardware, Farming Implements, Wagons, Barbed Fence Wire, Household Goods, etc.

All of our patrons can depend upon low cash prices and square deal in reliable articles.

Cor. of Santa Clara and San Pedro Sts.

A CARD

To Grangers and Farmers.

The undersigned is now prepared to receive and sell

HAY, GRAIN, HORSES and CATTLE,

That may be consigned to him, at the HIGHEST MARKET RATES, and will open a trade direct with the consumer

Without the Intervention of Middlemen.

He also asks consumers of Hay and Grain and Stock Buyers to co-operate with him, and thus have but one commission between producer and buyer. Address

S. H. DEPUY,

Nos. 11 & 13 Bluxome St., San Francisco.

Grangers' Co-operative Business Ass'n Of Sacramento Valley.

Location: K & 10th Sts., Sacramento, Cal

Dealers in GENERAL PRODUCE, RETAIL GROCERIES, and sale of FRUITS. Desire the co-operation and trade of farmers in general. Pay the highest market rates for all produce, and sell for the smallest profit. Our orders are CASH on delivery. Goods shipped, marked C. O. D.

W. H. HEAVENER, Manager.

MONEY | FOOD

For Farmers. For Hogs.

CHEAP PORK.

The Brazilian Artichoke.

Is the cheapest and best food for Hogs, being ahead of any thing in existence for that purpose. 600 to 1,000 bushels to the acre. Little trouble. No harvesting. No feeding. The Hogs will help themselves if allowed to do so. I have a limited quantity of seed to sell. Send for Circular giving full information to

J. H. F. GOFF,

San Felipe, Santa Clara County, Cal

A FEW DEVONS AND GRADES

FOR SALE.

Address R. McENESPIE, Chico, California

The Motion of a Wagon Wheel.

The most of our readers will recollect the newspaper discussion, some three years ago, in regard to the relative motions of the upper and lower portions of a wagon wheel. The *Scientific American* thinks the position it took in regard to that question has been fully demonstrated as follows: "The instantaneous photographs of trotting horses, taken by Muybridge, of San Francisco, furnish the first visible demonstration of the much disputed fact that the top of a wagon wheel, when running along the ground, moves faster than the bottom. It is obvious that an instantaneous photograph of a wheel, revolving upon its axle in the air, would show all parts of the wheel with equal distinctness. But if the wheel have a progressive motion, and any one portion has a greater motion than its corresponding part, above or below, there must be a liability to blurring in that part of the picture.

These pictures are taken with so brief an exposure that the horse, though moving at a 2:24 gait, is sharply outlined. The wheels of the driver's sulky, however, have a different tale to tell. The lower third of each wheel is sharp and distinct as if absolutely at rest. Not so with the top, that part of the wheel showing a perceptible movement during the two-hundredth part of a second of the exposure of the plate. The upper ends of the spokes are blurred, and the rim likewise, thus giving a physical demonstration of the truth which mathematics establishes.

Necessary to Intelligent Farming.

That any farmer can afford to do without a good agricultural paper is beyond our comprehension. There are few really good farmers who do not take one or more. We never go through the *RURAL PRESS* of San Francisco without seeing some suggestions, either by correspondents or the editor, which should be of value to every farmer and stock-raiser in this State, to his sons and to his hired help. There is too much muscle, too much "bull force" and too little calculation about most farmers. The man who does less work and more planning, who avails himself of the experience of others, invariably succeeds best. A man in these days, to succeed in farming or any other undertaking, must know more than his father knew. He must have the ambition to learn what is required in his business and keep up with the times. This can be done by observing what his more intelligent neighbors are doing around him and what they are doing elsewhere, through the columns of some enterprising newspaper. The *RURAL PRESS* is undoubtedly the best agricultural paper on the Pacific coast, and one of the leading journals of its kind in the country. Subscribers are entitled to club it with the *Delta* at a reduced rate—the two for \$5, or by itself (strictly in advance) for \$3.50 per annum. Specimen copies can be found at the *Delta* office.—*Visalia Delta*, October, 1878.

FRESH attractions are constantly added to **Woodward's Gardens**, among which is Prof. Gruber's great educator, the *Zoögraphicon*. Each department increases daily, and the *Zoögraphicon* performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

A PAPER FOR YOUNG PEOPLE.—The *Youth's Companion* of Boston employs the same writers as the best English and American magazines, and no other publication for the family furnishes so much entertainment and instruction of a superior order for so low a price. Among its contributors are DINAH MULOCK CRANE, MASH YONOK, J. T. TROWBRIDGE, LOUISA M. ALCOIT, HENRY W. LONGFELLOW, JAMES T. FIELDS, JOHN G. WHITTIER, and nearly fifty of the best story writers.

POPULAR MUSIC.—Make your homes merry and popular with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. The *RURAL PRESS* can offer to introduce you there.

NEW MUSIC.—Oliver Ditson & Co. send us, as specimens of their new sheet music, three songs: "The Moss Trooper," a heroic ballad by Diehl; "So Sings the Lark," music by Franz Abt, and the "False Oracle," a pretty Flower Song by Hutton. Also, three piano pieces: "Joyful Strains," a Medley Quadrille by Schacht; "Frank and Free," a Grand Military March by Steinhilber, and a curious piece of instrumental Fun called "Humoresque," by a composer of the strange name of Tschakowsky.

SEND to Edward Frisbie, Anderson, Shasta County, Cal., for illustrated circular containing agricultural lands in that county—where the climate is excellent and crops are certain.

THE celebrated Troy (N. Y.) shirts can be found at Palmer Bros., No. 726 Market street, San Francisco. They keep a full and complete stock, laundered and unlaundered, of men's and boys' sizes of the above make.

ARTESIAN WELLS WANTED.—Parties who are prepared to contract for boring artesian wells are invited to send terms to Edward Frisbie, proprietor of the Reading Ranch, Anderson, Shasta County, Cal.

WHEN A LADY wants a cloak or suit for herself or child and feels in doubt where to buy it, we cheerfully recommend her to go to Sullivan's, No. 120 Kearny street, San Francisco, where she can always find the cheapest and best assortment.

SAN JOSE is decidedly a very popular place of residence on this coast, and James A. Clayton is its leading agent for the sale of city and country real estate. See advt.

MODEL MAKER AND MACHINIST.—I. A. Heald, No. 514 Commercial St., San Francisco, (fourth floor.)

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, December 18th, 1878.

Markets are still quiet except in the decorated bazaars, where Christmas goods are passing over to gift-makers by the truck load. Other business rests in contemplation of the holidays.

The best news of the week is the return of gold to a par value with the National currency for the first time in 16 years. Sales are reported from New York of gold in even exchange for greenbacks.

The foreign markets are still dropping on Wheat, and the cable takes a still lower range. There is little reason to expect much improvement until the New Year's business opens.

Range of Cable Prices of Wheat.

The course of the Liverpool quotation for Wheat to the Produce Exchange during the days of last week has been as recorded in the following table:

	CAL. AVERAGE.				CLUB.			
Thursday...	9s	7d	9s	9d	9s	7d	10s	—
Friday...	9s	2d	9s	6d	9s	6d	9s	11d
Saturday...	9s	2d	9s	6d	9s	6d	9s	11d
Sunday...	9s	2d	9s	6d	9s	6d	9s	11d
Tuesday...	9s	1d	9s	6d	9s	6d	9s	10d
Wednesday...	9s	1d	9s	6d	9s	6d	9s	10d

To-day's cable quotations to the Produce Exchange compare with same date in former years as follows:

	Average.				Club.			
1876...	10s	10d	11s	1d	10s	11d	11s	6d
1877...	12s	7d	12s	11d	12s	10d	11s	2d
1878...	9s	1d	9s	6d	9s	6d	9s	10d

Freights and Charters.

The freight market continues without life, and rates are entirely nominal. Last charter for Wheat to Cork at £1 14s.

The Foreign Review.

LONDON, December 17. The *Mark Lane Express* says: Very little was done the past week, as far as the final sowing of Wheat is concerned, in this country or the north of France; but the appearance of the young plant does not occasion much anxiety. Farmers have been enabled to thresh under more favorable conditions, and the quality and condition of home offerings of home-grown grain have consequently improved. Despite this fact, trade is unusually dull. Millers are not disposed to increase their stocks; but, independently of this, the commercial atmosphere of the country is clouded by the ruinous state of trade in the manufacturing districts and the distrust occasioned by the heavy disabilities in financial circles. Shipments from St. Petersburg being now practically ended, and California supplies still in the distance, the attention of trade will center upon the action of the Atlantic States, upon whose judicious management of their large resources the future course of prices in this country will chiefly depend. It must be admitted that, independently of possible political contingencies, any marked advance in the price of Wheat is difficult to foresee; especially as there is so little unemployed capital in the country available for speculative purposes. But, on the other hand, the probability of a severe winter is a strong ally on the side of holders, which justifies their abstention from pressing sales at the moment, and may raise values a few shillings per quarter at no distant date.

Eastern Grain Markets.

CHICAGO, December 14.—Prices have fluctuated fairly with a general upward tendency, but the result has not been particularly encouraging to either side of the deal. Sales of February were made at 82½¢@84½¢, closing at the former price. Corn was rather steadier, with sales of February at 30½¢@31½¢. Oats for January were very dull, selling at 19½¢@20½¢. Provisions were unsettled, with continued downward tendency, but with a good strong rise and firm feeling at the close to-day. The light character of incoming hogs and the prospect of reduced receipts, makes a strong market in provisions. Pork for February, 87½¢@88½¢; Lard, 35½¢@37½¢.

CHICAGO, December 14. The *Tribune's* reports regarding the Winter Wheat outlook throughout the Northwest are generally of an encouraging character. In many localities the acreage has been reduced by reason of the unusual drouth which prevailed during the fall months, while in others the acreage has been largely increased, and the prospects are good for an abundant crop.

Eastern Wool Markets.

NEW YORK, December 16.—As the year draws to a close, a disposition is manifested among buyers of Wool to purchase lightly as possible, so as to make the turn with as small stock as the condition of trade will permit. The unfavorable weather of the past week has also had much to do with the reduced volume of business. But the feeling at the close was characterized by increased firmness, the opinion being general that the new year will develop a better trade, if not a slightly higher range of values. Stocks at the present time are much smaller than at the same period in other years, and in some quarters doubts are expressed as to the quantity being sufficient to meet the requirements of manufacturers. Importations of clothing descriptions were never smaller, and the fact is pointed to that the clip of California alone is some 10,000,000 pounds below that of last year. In foreign carpet stock there is little or nothing doing, as manufacturers are supplying their limited requirements by use of the domestic article.

BOSTON, December 14.—Wool was in moderate demand, but prices have again settled down, and fine fleeces are fully 1¢@1½¢ lower, with an unsettled and unsatisfactory market for all kinds. Manufacturers are still bearing prices, and a leading mill has succeeded in purchasing round lots of XX fleeces at 34¢. The prospects of the trade are not very encouraging. Some holders are anxious to close up stock as much as possible before the end of the year, and are willing to meet responsible buyers at comparatively low figures. Sales comprise Ohio, Pennsylvania and West Virginia fleeces, at 34¢@36¢; Michigan fleeces, X and No. 1, at 30¢@31½¢; Wisconsin fleeces, 31¢@32¢; medium New Hampshire fleeces, 35¢; Western and New York fleeces, 29¢@31¢; delaine and combing fleeces, 31¢@41¢; Oregon combing, 28¢@27¢; low unwashed combing, 20¢; unwashed and unmerchantable fleeces, 20¢@25¢; Texas, 18¢@24¢; Territory, 14¢@25¢; Oregon, 28¢; scoured, 27¢@55¢; and superand X pulled, 25¢@40¢. In California there was more doing. Sales of the week amounted to 519,000 pounds, at 18¢@25½¢ for Spring, and 10¢@23¢ for Fall. The principal sales of Spring were at 24½¢@25½¢. Total sales of domestic for week, 1,303,300 pounds.

Receipts of Domestic Produce.

The following table shows the San Francisco receipts of Domestic Produce for the week ending at noon to-day as compared with the receipts of previous weeks:

ARTICLES.	WEEK. Nov. 27.	WEEK. Dec. 4.	WEEK. Dec. 11.	WEEK. Dec. 18.
Flour, quartersacks...	47,503	50,274	41,769	52,686
Wheat, centals...	72,093	203,074	114,456	167,225
Barley, centals...	16,088	21,552	22,387	40,140
Beans, sacks...	4,705	7,510	6,347	5,666
Corn, centals...	7,955	6,734	18,104	13,455
Oats, centals...	9,976	11,284	12,710	13,740
Potatoes, sacks...	20,466	14,234	16,269	18,943
Onions, sacks...	1,229	854	715	796
Wool, bales...	506	940	476	181
Hops, bales...	281	110	55	80
Hay, bales...	1,180	1,185	1,564	780

BAGS.—Our list shows a decline in Flour Sacks, and in Burlaps. Standard Grain Bags are still being talked at by speculators, but no considerable transactions are reported.

BARLEY.—Feed Barley has sold at a little lower range; \$1 being now about the best rate for this description. Brewing lots are firmly held at old prices.

BEANS.—The week brings an advance of 12½¢ to 25¢ per cwt on nearly all kinds of Beans. Receipts are smaller, and the trade is taking care of the supply. Beans have, however, several points to make before they get to their usual mark in this market.

CORN.—Corn is very slow of sale, and prices are unchanged. Large Yellow now holds \$1.05 as about the top price.

DAIRY PRODUCE.—The Butter market is still improving satisfactorily. The supply of Pickle Roll is reduced, so that dealers report no first-class goods, and thus this grade is nearly out of the way. Firkin Butter is also practically exhausted. An old receiver tells us that the market has not been so bare of Butter for five years. This augurs well for the coming market of Fresh Roll, and gives a good outlook to the business. Cheese is still unchanged. Large supplies are still held, and this interferes with any improvement in price. Butter prices have advanced, as shown in our list.

EGGS.—Eggs are unchanged, but the outlook is for an advance. Oregon Eggs are withheld, by the better price at the north. Eastern Eggs are nearly all used up, and the cold weather has cut off shipments for fear of freezing. A better price seems just at hand.

FEED.—The millers have advanced a dollar a ton on Bran and Middlings. Hay is very dull and prices low.

FRESH MEAT.—We note an improvement in Beef; all grades being advanced a fraction. Other Meats are unchanged.

FRUIT.—There is no notable change, except a doubling of prices by Winter Nellis Pears.

HOPS.—We hear of no sales of account in this market. Emmet Wells reports the New York market for the week ending December 6th, as follows:

Notwithstanding the shipment to Europe of nearly 1,000 bales again this week, the price on low and medium grades has declined from 1¢ to 3¢ per lb. This unfavorable turn in the market may be attributed entirely to the continued persistency of the few holders (mostly growers) who are still here pressing the sale of their flops, and accepting whatever bids they can get. Choice New York State and Pacific coast Hops, from their scarcity, maintain late values.

LIVE STOCK.—We hear sales of 800 Hogs at 3¼¢@3½¢ per lb, alive; 500 Sheep at \$2.50, Wool on.

ONIONS.—All kinds are 25¢ lower per cwt, the top being now \$3.50.

POTATOES.—We notice a slight advance in Petalumas, Humboldt and Early Rose; Sweet Potatoes have dropped back to \$1.50.

PROVISIONS.—Heavy California Bacon dropped a fraction.

POULTRY.—Geese and Turkeys show a tendency to advance to holiday prices. Hens are 50¢ lower on the dozen.

VEGETABLES.—Early and Marrowfat Squash are advanced a little. Tomatoes have fallen back to low figures.

WHEAT.—Rates are unchanged and transactions light. We note sales of 6,400 and 4,000 cts choice Shipping at \$1.75; 400 good Milling at \$1.75; 2,000 fair Shipping at \$1.66.

WOOL.—There is nothing new and nothing doing in this market. We note sales of 30,000 lbs various grades at 10½¢@15¢.

FRUITS AND VEGETABLES.

[WHOLESALE.]

WEDNESDAY M., December 18, 1878.

Apples, box...	3 50	5 00	Peaches...	7 00	8 00
Bananas, bunch...	3 50	5 00	do pared...	18 00	20 00
Cocoanuts, 100...	4 00	5 00	Pears...	3 00	4 00
Cranberries, bbl...	12 50	14 00	Plums...	12 00	14 00
Figs, box...	6 00	6 50	Pitted...	12 00	14 00
Grapes...	75 00	1 25	Prunes...	8 00	9 00
do, Conehoni...	8 00	9 00	Raisins, Cal, bx...	1 50	2 25
Limes, Mex...	8 00	9 00	do, Halves...	1 75	2 50
do, Cal, per M...	3 00	4 00	do, Quarters...	2 00	2 75
Lemons, Cal M...	15 00	20 00	Blowers...	2 75	3 00
Sicily, box...	9 00	10 00	Malaga...	2 75	3 00
Australian, bx...	—	—	Zante Currants...	8 00	10 00
Oranges, M...	30 00	40 00	Beets, cwt...	50 00	—
Tahiti...	—	—	Beans, String...	—	—
Cal...	—	—	Cabbage, 100 lbs...	40 00	50 00
Pears, box...	50 00	1 00	Carrots, cwt...	35 00	40 00
Winter Nellis...	—	—	Cauliflower, doz...	50 00	—
Pineapples, doz...	7 50	—	Cucumbers, bx...	—	—
Plums, lbs...	5 00	—	Egg Plants, box...	—	—
Quinces, bsk...	75 00	1 00	Garlic, New, bx...	4 00	5 00
Swberries, bbl...	10 00	13 00	Grocery Beans...	—	—
do...	—	—	Lettuce, doz...	10 00	—
Apples, B...	3 00	5 00	Ferns...	2 00	—
Apricots...	15 00	—	Horse-radish...	8 00	—
Citron...	23 00	—	Squash, Marrow...	—	—
Dates...	9 00	10 00	fat, tn...	—	12 50
Figs, Black...	4 00	5 00	Tomato, 50 lbs bx...	40 00	50 00
White...	6 00	—	Turnips, cwt...	50 00	—
			White...	50 00	—

Gold, Legal Tenders, Exchange, Etc

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, December 18, S. P. M.

LEGAL TENDERS IN S. F., 11 A. M., per SILVER, 26½¢. GOLD IN NEW YORK, 100½.

Gold Bars, \$200. SILVER Bars, 82½¢ cent. dia count.

EXCHANGE ON NEW YORK, 35, on London bankers, 49½¢ @ 49½. Commercial, 50; Paris, five francs \$1 dollar; Mexican dollars, 88¢@90.

LONDON Consols, 94 7/16; Bonds, 108½. QUICKSILVER IN S. F., by the flask, ½ lb, 40¢@41¢.

DOMESTIC PRODUCE.

[WHOLESALE.]

WEDNESDAY M., December 18, 1878.

Beans & Peas...	2 10	2 25	Almonds, hd shd lb...	7 00	8 00
Butter...	2 87	3 25	Soft shd lb...	14 00	16 00
Pea...	3 12	3 25	Pecans...	12 00	14 00
Red...	1 85	1 95	Peanuts...	4 00	5 00
Pink...	1 90	2 00	Filberts...	15 00	16 00
Salt White...	2 75	2 85			
Lima...	1 00	1 25			
Field Peas...	1 00	1 25			
BROOM CORN...	2 00	2 25			
Southern...	2 00	2 25			
Northern...	3 00	3 25			
CHICORY...	4 00	4 25			
German...	6 00	6 25			
DAIRY PRODUCE, ETC.					
Butter...	30 00	35 00			
Fancy Brands...	35 00	37 00			
Pickle Roll...	—	—			
Western...	12 00	17 00			
New York...	—	—			
CHEESE...					
Cheese, Cal, D...	8 00	12 00			
Gilroy Factory...	11 00	13 00			
N. Y. State...	16 00	17 00			
Cal. fresh, doz...	35 00	37 00			
Ducks...	25 00	30 00			
Oregon...	18 00	25 00			
Eastern...	18 00	25 00			
do by express...	27 00	30 00			
Pickled hens...	25 00	27 00			
FEED...					
Bran, ton...	—	12 00			
Corn Meal...	24 00	26 00			
Hay...	7 50	16 00			
Middlings...	23 00	24 00			
Oil Cake Meal...	50 00	70 00			
Straw, bale...	—	—			
FLOUR...					
Extra, bbl...	5 12 1/2	5 25			
Superfine...	4 00	4 25			
Graham, lb...	2 1/2	3 00			
FRESH MEAT...					
Beef, 1st quality, lb...	6 00	7 00			
Second...	5 00	6 00			
Third...	3 00	4 00			
Mutton...	3 00	4 00			
Spring Lamb...	5 00	6 00			
Pork, undressed...	3 00	3 30			
Dressed...	5 00	5 30			
Veal...	4 00	5 00			
Milk Calves...	6 00	6 00			
do choice...	7 00	7 00			
GRAIN, ETC.					
Barley, feed, cwt...	85 00	100 00			
Brewing...	1 15	1 30			
Chevalier...	1 75	2 00			
Buckwheat...	25 00	30 00			
Corn, White...	1 00	1 10			
Yellow...	1 00	1 05			
Small Round...	1 00	1 10			
Oats...	1 25	1 50			

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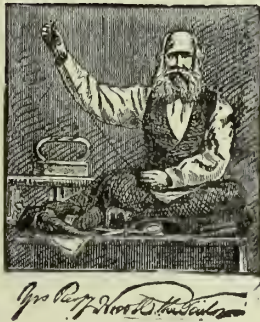
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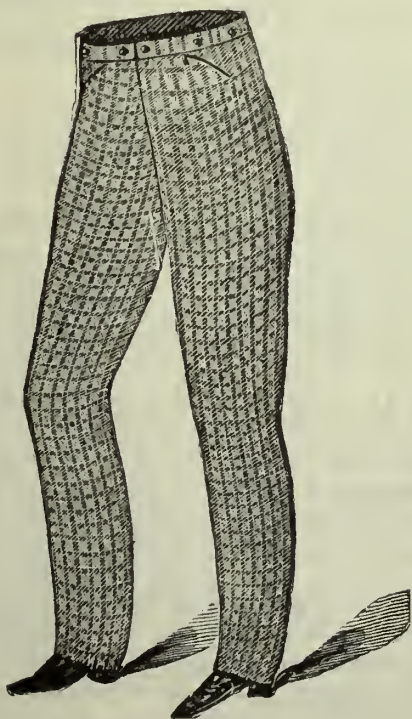
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Pants from.....\$.700
White Vests f'm.. 3.00
Fancy Vests..... 6.00



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But not expressed in fancy; rich, but not gaudy;
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—Byron.

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J. H. CAVANAUGH,
Walla Walla, Dec. 24th.

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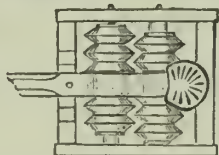
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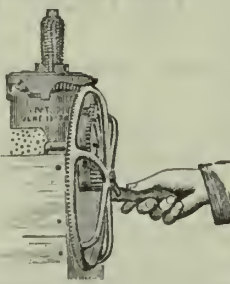
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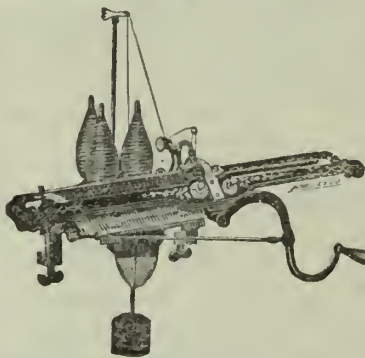
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proved) is only one block from the depot. It has Mos-
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Free. Prices of room and board reduced to
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This popular City of Homes is the largest business center
south of the Golden Gate. It is surrounded by the most
thickly settled farming district in the State—owing largely to
the combined advantages of rich soil, mild and healthy cli-
mate and nearness to market. Cheap and healthy living,
with favorable facilities for transportation, favor the com-
mercial and manufacturing interests of the enterprising citi-
zens of this early settled, appropriately termed "Garden City."

THEOPHILE PINARD,

Alameda Carriage Factory,

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Blacksmithing of all kinds Neatly
and Promptly done.

Horseshoeing a Specialty.

H. J. HASKELL,



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SPRING WAGONS,

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FINCH'S CURE ALL—Warranted to cure all sores, old
or fresh, on man or beast.

FINCH'S CELEBRATED HORSE RENOVATING MED-
ICINES—Used by Montgomery Queen for many years.

Testimonials.

MR. S. FINCH—Dear Sir:—I have given your Horse Medi-
cine a fair trial, and find that it works satisfactorily, and feel
fully warranted in recommending it to the public.—Geo. B.
McKEE, San Jose, October 10th, 1878.

I fully concur in the above testimonial, having given it a
thorough test.—S. A. Bishop, Pres't S. J. & S. C. R. Co.

MR. S. FINCH—Sir:—I have used your Cure All on sores
of all kinds, and can say it is the best I have ever had in my
barn for man or beast. I have also used your Renovating
Medicine, and can fully recommend it to the public. It
should be kept in every stable, even to feed occasionally to
keep horses in good condition. I keep it in my stable all the
time, and would recommend it to all horsemen—especially to
those keeping livery and railroad horses.—R. K. H. M., Santa
Clara, Cal., October 10th, 1878.

I hereby certify that I have sold Finch's Cure All in Michi-
gan for 10 years, and it has always given good satisfaction.
And for the last three or four years have sold it in San Jose,
and can truly say that it is one of the best preparations for
healing all manner of sores on man or beast I have ever sold.
—S. H. WAGNER, Druggist, San Jose, October 10th, 1878.

For sale, wholesale or retail, by

S. FINCH, 661 Seventh St., San Jose.

Or at WAGNER'S and RHODES Drug Stores, San Jose, Cal.

KEPT ON THE EASTERN PLAN.

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\$1.50 to \$2 per day. \$6 to \$10 per week. Carriage at-
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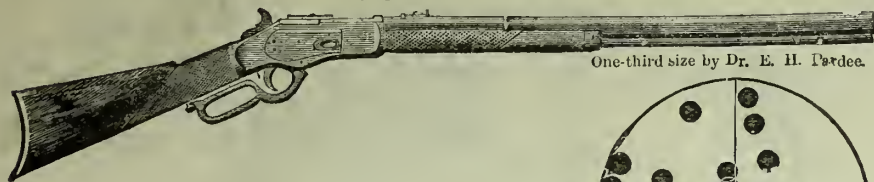
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Winchester Repeating Rifle,

MODEL 1873.



The Strength of All its Parts,

The Simplicity of its Construction,

The Rapidity of its Fire,

The Power and Accuracy of its Discharge,

The Impossibility of Accident in Loading,

Commend it to the attention of all who use a Rifle, either for Hunting, Defense, or Target Shooting.

The San Francisco Agency is now fully supplied with all the various kinds and styles of Arms manufactured by the Winchester Repeating Arms Company, to wit:

Round barrels, plain and set, 24 inch—blued. Octagon barrel, plain, 24 inch—blued. Octagon barrel, set 24, 26, 28, 30 inch—blued. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—blued. Octagon barrel, set, 24, 26, 28, 30—extra finished, case hardened and check stocks. Octagon barrel, set extra heavy, 24, 26, 28, 30 inch—extra finished—C. H. & C. S. Octagon barrel, set, 24, 26, 28, 30 inch—beautifully finished—C. H. & C. S., known as "One of One Thousand." Octagon barrel, set, gold, silver and nickel plated and engraved. Carbines blued, also gold, silver and nickel plated. Military rifle muskets, model 1873. Rifles, muskets and carbines, model 1866. RELOADING TOOLS, PRIMERS AND PARTS OF ARMS.

A heavy stock of Cartridges Manufactured by the W. R. A. Co., for all kinds of Rifles and Pistols, constantly on hand and warranted the best in the market.

Sole Agent for Dupont's Mining, Blasting, Cannon, and Celebrated Brands of Sporting Powder.

JOHN SKINKER, No. 115 Pine Street, San Francisco,
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PACIFIC

Bone Coal and Fertilizing Material Co.

Office, 21 Sansome St., San Francisco.

Pure Bone Meal, Superphosphate, Animal Fertilizers, Bone Meal for Chicken and Stock Feed.

In order to introduce our fertilizers, and to prove that we are using nothing but pure materials, and being positive that when properly used they will double the yields of most crops, and at the same time enrich the soil, we are willing to furnish small lots, of 100 pounds and upwards, at low prices.

For Circulars, giving information concerning the use of the fertilizers on different crops, apply to or address the Company's office, No. 21 Sansome Street, San Francisco.

A. HAAS, Manager.

MAKE NOTE OF FACTS AS NOTED BELOW.



The great popularity of the SCUTT PATENT STAR BARBED WIRE arises from the following peculiarities:

- 1st.—Owing to its being plaited (not twisted) it is stronger than any other Wire made. All other Wires, and especially close twisted Wires, are weakened; IT MUST BE SO, because the fiber of the metal is broken in twisting.
- 2d.—Our Patent Machines are the only ones that form a Barbed Wire Cable without twisting the single strand of Wire.
- 3d.—We use STEEL made by the Siemens & Martin process, for Barbs, the best in the world. Our Wire is made entirely by Machinery, and is perfectly uniform.
- 4th.—It is coated with our own weather-proof Iron Cement Coating—rust proof. It has been imitated, but never equalled. Weight—17 ounces per rod.
- 5th.—It costs from 20 to 40 percent less than an equally good board fence.
- 6th.—1,440 pounds will make a fence one mile long four Wires high.
- 7th.—The wind will not blow it down; fire will not burn it; boys will not climb it; in fact it is a four-pointed argument that both man and beast will heed.
- 8th.—For a Hog-tight fence use one board and three Wires, posts 8 to 10 feet apart. For Cattle and Horses, three Wires, posts from 8 to 20 feet apart.
- 9th.—It is lighter, will reach farther, last longer, turn stock better, and look handsomer than any other Wire on the market. If these are not found to be facts return to

GRANGERS' UNION Wire Fence Department, Manufacturers, Stockton, Cal.

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which are calculated to deceive the Public, Lea and Perrins have adopted A NEW LABEL, bearing their Signature, thus,

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Ask for LEA & PERRINS' Sauce, and see Name on Wrapper, Label, Bottle and Stopper. Wholesale and for Export by the Proprietors, Worcester; Crosse and Blackwell, London, &c., &c.; and by Grocers and Oilmen throughout the World.

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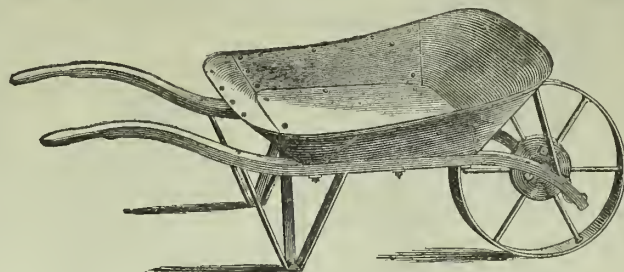
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IRON PIPE.SHEET
IRON PIPE.

The Strongest Barrow Made. These Barrows are made by Superior Workmen, and of the best material. All sizes kept constantly on hand.

Lap-Welded Pipe, all Sizes, from Three to Six Inches. Artesian Well Pipe. Also, Galvanized Iron Boilers, from Twenty-five to One Hundred Gallons.

Iron Cut, Punched, and Formed for making pipe on ground, where required. All kinds of tools supplied for making pipe. Estimates given when required. Are prepared for coating all size of pipes with a composition of Coal Tar and Asphaltum.

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LATEST STYLES AND LOWEST PRICES.



For Crippled and Deformed Persons,

Is the largest Institution of its kind on the Continent. The Medical and Surgical Staff comprises the best talent in the country. There have been more cases of human deformities successfully treated than by any similar Institution. More than 50,000 cases have been successfully treated. Diseases which are made a specialty—Curvature of the Spine, Hip Disease and all Diseases of the Joints, Crooked Limbs, Club Feet, Piles, Fistula, Nasal Catarrh and Paralysis.

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REPOSITORY AND SALE STABLES, Corner New Montgomery and Mission Sts.

Our Sale Stables are the largest on the Pacific Coast, having a large Amphitheater with first-class facilities for the exhibition of stock. We have ample accommodations for two hundred head of horses, and are ready to receive consignments from all parts of the country, to be cared for at reasonable rates until day of sale.

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MUSICAL BOXES

For Holiday, Birthday and Wedding Presents.

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Manufacturers and Importers,

No. 120 Sutter St., San Francisco.

GRAND HEADQUARTERS.



Volume XVI.]

SAN FRANCISCO, SATURDAY, DECEMBER 28, 1878.

Number 26.

A Fruit Fair in Los Angeles.

EDITORS PRESS:—Our society intend to hold a fruit exhibition next spring, and desire the opinion of those best posted throughout the State as to the best time for holding the fair. We shall extend competition to the entire State, and shall hope to receive support from the upper country, especially in semi-tropical fruits. The suggestions of the PRESS in a recent number were in entire accord with steps already taken by our society. We hope to receive your co-operation and support, and would be glad of your opinion as to time and other matters.—L. M. HOLR, Sec'y, Southern California Horticultural Society, Los Angeles, Cal.

The project certainly has our approval as given in our recent article on the subject, to which reference is made above. There are so many points to consider in fixing upon the best time for holding a fruit fair, that it can only be decided upon after wide discussion of the subjects by all interested. As the society speaks of a "fruit fair," the inference is that the leading classes of fruit are expected to be covered in the plan. If it were to be a "citrus family fair," a compromise date, to allow for different times of ripening, might easily be decided upon, because the fruit of the citrus family is so durable both upon the tree and after it is picked. This would probably be the chief feature of the fruit fair.

It would be hardly less desirable to hold fairs for the exhibition of small fruits and early standard fruits, which might ripen contemporaneously, but it would be hardly possible to hold a fair in any single locality which would accommodate exhibitors from all over the State, because of the different times of ripening and the perishable nature of the fruit. It would be our idea that much good could be done among fruit growers in all fruit districts if each locality would arrange its own local fruit fair, at a date best suited to itself. The expense would be very slight; the great need would be the awakening of interest, so that growers would come forward at a certain time with samples of all the varieties found valuable, with each properly named. It would be easy then to see what varieties of the different fruits were adapted to the conditions of special localities.

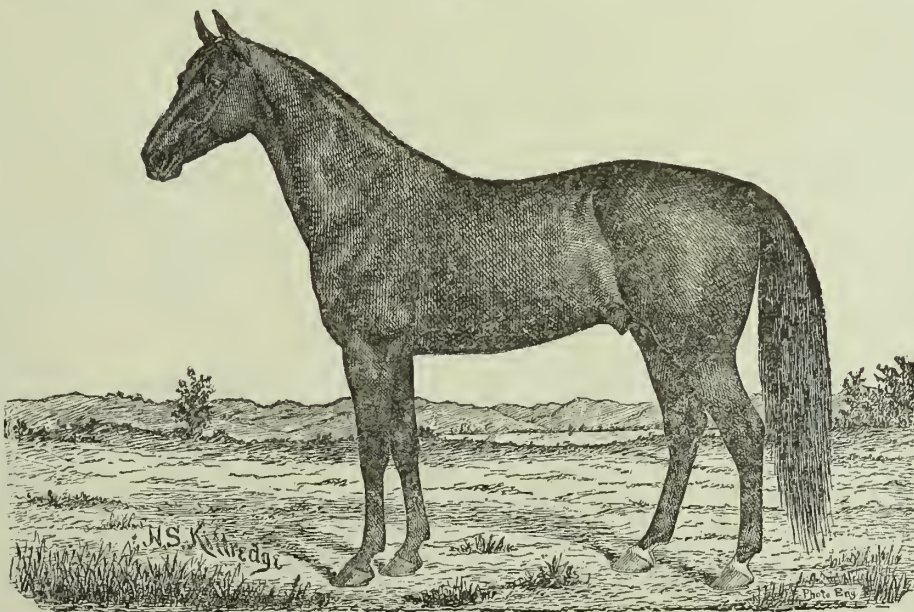
Concerning the holding of a general citrus fruit fair, it would be well to consider carefully both time and location before decision was made. Let all our readers who are now wide awake on the growth of the orange and the lemon, because of the success of their early experiments, advise us of the time when their fruit would be in the best condition to show, and of any plans for holding the mooted fair which may occur to them. We know no better way to decide upon a scheme which will enlist general approval, than to secure the aid of all in devising the scheme itself. The subject is open for discussion by all who are interested.

ENGINEERING.—We notice that Col. J. D. Schuyler has been called from his chair as local editor of the *Stockton Independent*, to take a position on the staff of State Engineer Hall. Col. Schuyler is well fitted for this branch of the State's work, both by talent and education, and we have high trust in his record in his new field. He has an earnest zeal for developing the resources of the State, and we doubt not this will be the moving impulse in the important task which he assumes.

ONE Maudie, a naturalized American, has been prohibited from lecturing in Berlin on the improved prospects of our Western States.

A Fine Hambletonian Stallion.

This beautiful horse stands at the head of the Hambletonian department of the extensive breeding establishment of Messrs. Smith & Powell, of Syracuse, New York, and is owned jointly by them and Messrs. Powell Bros. He is a beautiful dark bay of superb style, finish and action. His royal pedigree is sufficient evidence of his remarkable quality and wonderful natural speed. Although entirely undeveloped, it is conceded that he can show a gait in the "twenties." He was sired by Satellite, the most noted son of Robert Bonner, and he by Rysdyk's Hambletonian. Satellite's dam Pet by Champion (Crawford county); he by Champion (Grinnell's); he by Almach; he by Mambrino, etc.; Champion's (Crawford county), dam Kitty Peck, by American Hero; he by Bushe's Messenger; Champion's (Grinnell's) dam Spirit, by Engineer Second (the sire of Lady Suffolk), by Engineer son of imported Messenger; second dam by American Eclipse.



"REVELER," A FINELY BRED HAMBLETONIAN STALLION.

Reveler's dam Lizzie, an elegant bay mare, formerly well known on the "Harlem Road," was sired by Rysdyk's Hambletonian; second dam, Gold Button, by Exteu Eclipse, he by American Eclipse; third dam, Dolly, by Paymaster, and he by imported Brown Highlander; fourth dam, Amy, by Sir Thomas; he by Durve, and he by imported Diomed. Fully extended, Reveler's pedigree possesses no less than 20 strains to imported Messengers. His get possess the same finish, style and remarkable natural speed of their sire. All his colts, with a single exception, a dark gray, are the same rich dark bay color. Although continually in the stud for five years he has not yet sired one blemished or unsound colt. Messrs. Smith & Powell are extensive breeders of Hambletonian and Clydesdale horses and Holstein cattle. Their catalogues of either of these herds will be sent free on application, and will be found of interest to breeders and farmers.

ONE of the school scandal witnesses has gone to Honolulu. A delinquent witness has been bound to appear before the committee.

REPORTS of dreaded socialistic movements in Germany are followed by rumors of Nihilistic uprisings in Russia.

INDIAN CORN AS HORSE FEED.—In answer to a query as to the value of Indian corn as feed for horses, we expressed the old opinion that it would not serve so well as the grains now generally used, from its evident deficiency in the qualities needed to build up strength in the animal. This old judgement of the grain is now approved by abundant experiments abroad. Among the most complete trials are those undertaken in the French army, both in the northern and southern garrisons of the country, as also upon horses of every variety of breed. The reports sent in upon the results unanimously point to the conclusion that in whatever proportion maize be substituted for oats, a loss of muscle and energy invariably manifests itself in the long run, besides which the horses sweat to an inordinate extent, and are very easily blown. The Ministry of War has consequently directed this system of feeding to be discontinued, whatever saving in the cost of keep it may effect, being more than counterbalanced by the loss of condition in the horses.

The Paris cabmen, too, who have good opportunities of judging how much work can be got out of their cattle, seem to be unanimous in denouncing maize-feeding as a delusion and a snare.

CARNIVOROUS PLANTS.—We are indebted to Mr. Peter Henderson, of New Jersey, the well-known seedsman and horticulturist, for an account of a number of experiments he made with *Dionaea muscipula* (fly-trap), to test the truth of Darwin's dictum on the superior growth of "carnivorous plants" when fed upon a meat ration over those growing simply upon soil nutriment. Mr. Henderson grew 100 plants each way; one hundred being fed daily for three months with flies, the others growing under a gauze to protect them from all approach by insects. At the end of the three months the plants were carefully examined, and no difference whatever could be seen in the growth of the two sets of plants. So far as this experiment goes it, indicates that Mr. Darwin's decision is under suspicion at least.

A NEW dollar, about the size of a half dollar, and containing half as much gold as the present gold dollar, and half as much silver as the present silver dollar, is advocated as a compromise between gold and silver.

The Growth of the American Dairy Interest.

We have received several inquiries of late concerning the growth of the American dairy interest, and we do not wonder at it, for no specialty of agriculture has attained such rapid and magnificent increase in this country. Last spring we gave some interesting statistics, more particularly with reference to the increase of dairy production in this State. Now, as they have just held in New York the largest display of dairy produce ever held in the world, it seems proper that the general subject should be commented upon briefly. For such a comment we are indebted to the researches of J. H. Reall, of New York city, one of the most zealous students of dairy progress in the country.

The production of butter and cheese as specialties, began in the eastern part of New York State scarcely 30 years ago; thence it extended northward and westward, until it has become the leading industry of the State. In Pennsylvania, the best counties are devoted to dairying; the northern part of Ohio makes it a specialty, several counties of Michigan, all of northern Illinois, the best sections of Wisconsin, and portions of Iowa, give almost exclusive attention to making butter and cheese. Colorado has established several cheese factories, and California, within 10 years, has changed from an importing to an exporting State in these articles. Fifteen years ago, Chicago merchants obtained their supplies of cheese from the East; while at the present time 100,000,000 pounds pass through that city for New York annually. Canada, within a brief period, has become our competitor in the English markets to the extent of 80,000,000 pounds yearly, while she formerly bought of us. With the exception of the States mentioned and a few counties in Vermont and New Jersey, the remainder of the United States buy more than they produce. The entire South is supplied from New York city and the West.

The value of the land and cows in the United States employed in furnishing milk, butter and cheese, is not less than \$1,300,000,000 or the sum of nearly half the National debt, at its highest point. Over 3,000 factories are engaged in the manufacture of these articles, and tens of thousands of private dairies besides. The production of cheese is estimated at 350,000,000 lbs. per annum, and of butter about 1,500,000,000; of the former 130,000,000 lbs. will be exported this year and about 25,000,000 of the latter, the value of the two is about \$350,000,000, or \$50,000,000 more than the wheat crop of the country; three times more than the oat crop; four times more than the potato crop one-seventh more than the hay crop; one-third more than the cotton crop, and but one-fifth less than the corn crop. The number of cows in the United States is over 13,000,000; which is six times the number in Great Britain, over twice the number in France, two and a half times more than in Prussia, and more than in the countries of England, Ireland, Scotland, Wales, Denmark, Norway, Sweden, Russia, Finland, Austria, Hungary and Switzerland combined; although these countries together contain four times the population of the United States. The proportion of cows to the inhabitants here, is 29 to each 100 persons.

EARTHQUAKE at Yuma, Dec. 17th.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Scenes in the High Sierra Back of Yosemite—Continued.

[Written for the RURAL PRESS by J. G. LEMMON.]

No. 2. Mount Lyell and its Glaciers.

"Who has not heard of the lofty Lyell group of peaks, and of their system of still living glaciers?" The dignified Prof. Whitney has ably described them in the cold exact terms of science, and the Bonny Scot, Johnny Muir, has set them forth in warm, glowing language, that is just as truthful, and ten times more readable for the average mind. "Who would not visit them from a distance, if able, especially, who would not make a desperate effort if he happened to be in sight of the glistening pinnacles, even though his back was nearly broken?" Thus I reasoned as I looked off from the dizzy crown of *Tis-sa-ack*, and studied the approaches to the wondrous group lying about 20 miles distant, as the bird flies, but with many miles of bald ridges and tortuous, wooded, dark valleys between. But resolution and ability were not in accord this time. The next morning I was unable to saddle my horse, and the next after, found me too weak to venture the chances of a toilsome, dangerous excursion, especially as I was alone. But to acquire strength I moved painfully about the woods near Anderson's cabin, securing among other rare plants, the *Bolandra Californica*, Gray, the type of a genus composed of a single species, and dedicated to Prof. Bolander, who, with the founder of the genus, are the only botanists that are reported to have met with the plant. The curious plants belongs to the saxifragae, very singularly combining in itself the characters of four or five of the genera.

Another striking plant growing here in a grassy bog, was discovered by Bolander, in the Mariposa station meadows, and named by him *Senecio Clarkianus*, in honor of Galen Clark, the genial pioneer of this region, and the present guardian of Yosemite valley.

The third morning found me on the Mono trail leading my burdened horse up the pass to Cathedral valley. The trail was in places obliterated by roving bands of sheep, causing much delay in searching for it, for attempting to proceed by any other way was fruitless. It was late in the eve when, after treading the long valley skirting the curious Cathedral, crossing spurs and winding around glacier lakes, I began to descend into a deep and broad valley, upon the farther side of which a column of smoke beaconed the way to Soda spring and to Lambert's cabin, a warm supper and a rude couch—the latter all too poorly supplied with blankets for my weak, dispirited condition.

The Tuolumne meadows carpet the floor of the deep, even-sided nearly straight valley of the upper Tuolumne, for a space of eight or ten miles long by a half to a mile wide.

This valley is the track, the wallowing trail of an immense glacier of the olden times, and every tough, rounded rock appearing on the floor or sides, shows the grinding action of the crawling monster, many of the silicious rocks shining like glass.

Avalanches.

The sides of the valley are clothed with the luxuriant *Pinus contorta* (miscalled "Tamarack"), save where broad gaps of one-half to a mile, show where from the snow-gathering crests along the lofty rim avalanches of snow and rocks thundered down, carrying the forest with them out into the valley. Some of the avalanches occurred at recent date, how recent might be easily approximated by cutting trees upspringing in their track and counting their rings of annual growth. Others cleared the timber off their pre-emption so long ago that the forest is nearly restored, but the precise width and comparative violence of the slide can be determined by noting the hummocks of rocks and earth lying in interrupted bands along the center of the valley—telling where decayed the upturn trees.

Above Soda spring a mile or two, the Tuolumne river, clear, cold and singularly destitute of fish, divides into two branches. The east branch comes from circling around the bases of Mounts Dana and Gibbs, 11 miles distant; the south branch, called Lyell Fork, comes gliding along a valley similar to the meadows, but with still more interesting evidences of snow and rock-slides. At the south end the walls close in and the water comes from two sources, cascading down a precipice half a mile high. Leaving my faithful Stanley here securely tethered with a long rope where he could eat and drink at will, I prepared to climb the precipice in the early morning of a fine August day. The vicissitudes of a long, perilous exploration had endeared us to each other, and it was with poignant sorrow that I shouted in reply to his neighing entreaties sent lovingly after me as I clambered up the precipice.

Climbing Mt. Lyell.

As I neared the top of this precipice, I looked expectantly for the peaks of Lyell, only to find a broad, bush-covered bench, back of which a mile away, rose another precipice a

half mile high. Climbing wearily up this, aided by the spirea and gooseberry shrubs clinging to the crevices of the rocks, I was encouraged by a most enchanting view of the peaks five miles away. Between lay an alpine plateau, destitute of trees, covered as late as July with snow, now partially exposed, revealing dozens of small placid emerald lakes imbedded in steep grassy banks, brilliant with rare flowers and butterflies.

The lakes with all their decorations were arranged in lines, between which rose long ridges of snow. Mounting one of these, I saw that they led back a mile to still another precipice, on the brow of which loomed the rounded, front-face of a semi-circular moraine. The region of living glaciers was near, and joyfully I hurried over snow ridges and around lakes, only occasionally snatching a flower and crowding it into my portfolio, or pinning a butterfly to my hat. I must not stop to study these wonderful phenomena now, for the noontide sun is shining hot, and the grand arcana is but entered.

"Will precipices never end," I exclaimed while pulling myself up the slippery, moss-grown rocks by laying hold of clumps of *Bryanthus Brewerii*, prettiest of California heathers, so charming that I must be pardoned for stopping to observe. One bluff several hundred feet in extent, was all ablaze with crimson and orange, the blended colors of this heather and another exquisite relative, *Cassiope Mertensiana*.

At last I encountered the sharp, steep-piled rocks of the moraine. Twice in my eagerness to get up, I displaced rocks and with them tumbled to the bottom. When at length I reached the crest, tired, bruised and torn, a scene appeared that stirred my being to its very depths! A still, azure lake, its farther shore being filled in with a vast semi-circle of angular rocks, which was curled around the front of an immense precipice of solid blue ice 40 feet high, and reaching from wall to wall of the canyon, its steel-blue upper edge along its entire rainbow curve burdened at intervals with toppling rocks, some of them as large as dwelling houses, while beyond and over all towered the snow-striped pinnacles of Lyell.

I could not shout this time, for I was thinking of far-away friends. I could only murmur the names of each and fervently wish them there at that supreme hour!

But we must not linger here. Other startling phenomena are at hand, and we will try to study them in proper connection at the close. Now, our business is climbing. We are yet to surmount formidable and unexpected difficulties.

Turning the flank of this barrier I was soon on the back of the glacier. The snow of several seasons lies on the top, blown by the wind into ridges and melted between by the sun. Here and there evenly scattered over the surface lie rocks of all sizes and shapes, torn, as we shall see, from the pinnacles above. Hurrying over the drifts and through the streams of water partially filling the furrows, I struck out for the nearest peak. At its top a sweeping curve of sharp rock led to a higher one, and this to another. On and up I pressed, my injured back complaining sharply and almost compelling a return. The flora was singularly abundant on these extreme heights, but I could only pause for a few rare species. By mistake I first ascended Mt. McClure nearly to the top, when, by chance, I angled a little to the left, and there, a mile away to the south, across a deeply furrowed ice-field, rose the loftier peak of Lyell. My watch told me it was 1:30 P. M., and I knew I was at least 10 miles from my bivouac. But my resolution was immediately taken. I slid down an incline of splintered rocks to the ice-field, climbed over rib after rib of the hard snow nearly to the base of the shining pinnacles, before I came upon the widest crevasses of this ice-field. [One I discovered too late for my comfort. In my haste I ran up the side of a rib and sprung over to slide swiftly but without injury to the bottom of a crevasse about 12 feet deep and four wide. Here was an adventure! However, I was glad that chance thus gave me an opportunity to inspect the bottom of a glacier, after which with my ever-ready botanical pick I dug holes in the inclined lower side of the crevasse for fingers and toes, and was soon on the way again. As I gazed up the culminating peak, and saw barriers innumerable with beetling crags surmounting almost vertical walls, I became well-nigh discouraged. But around to the south side appeared a heap of talus (broken rocks), and I judged a passage of some kind must be there; so I hastened around to see. There was a passage to be sure, but what a fearful one! A soft stratum of slate rock had crumbled away from between two vertical cleavage planes of granite about six feet apart. At intervals huge blocks of granite were lodged corner-wise in this open cut, while on the bottom piles of debris formed nearly horizontal landings, where temporarily arrested a few rods apart. I at once entered this chasm, for this Apian Way was my only hope to reach the summit. But the situation was frightful, and my nerves which never blanched before, not even when charging a battery of belching cannon, now caused a tingling sensation from head to foot. I think it resulted from the injury to my back. I almost recoiled from passing under boulders that, it seemed, only a touch might dislodge.

Once the landing of debris gave way beneath my feet, and I was precipitated wildly down to the next landing, which, luckily, was strong enough to resist the shock. Having reached the

top of my narrow-gauge, I found myself still several hundred feet below the summit. I had read in "Whitney's Guide," that when Clarence King climbed this peak, he was stopped when within about 150 feet of the top by a horizontal knife-edge of 12 feet long. I hoped that my short-cut came out above this barrier, but in a few minutes climb, I came upon the forbidding "knife-edge," with a sheer precipice of 1,000 feet on each side.

Resolutely clambering to it, I clasped my gloved left hand over the sharp edge, and with my pick in my right, dug niches in the side for the edge of my nailed boots, six such cuts enabling me to cross the frightful barrier. Ten minutes afterward I swung my hat triumphantly in the breeze from the highest pinnacle of Lyell, 13,217 feet above the sea!

The views on every side from this peculiarly central station are unexcelled on this coast, hut as nearly the same are presented from Dana, which I am next to explore, description is omitted here to give room for promised studies of glaciers and their work, which will be the subject of my next article.

Fresno County Irrigation and Crops.

EDITORS PRESS:—A ride on horseback in my present line and style of work, has brought me in a roundabout way through quite a strip of Fresno county, to my former home near Borden. A few items gathered on this business trip may be worth recording in the RURAL.

First about the entire rainfall at this point to date, the present season. A former letter gave the October rains—from 12th to 15th—amounting to 0.54 of an inch. The November storm—11th to 15th—brought 0.43 more. You see, then, that the entire rainfall during the two months has been not quite an inch—0.97. At present there are little or no indications of rain, so that whether the coming winter is to be a wet or dry one, is just about as uncertain as the character of California winters get to be.

In the midst of this uncertainty, it is encouraging to those who wish the greatest possible prosperity to our farming interests, to find that facilities for irrigating larger areas

Are Being Steadily Increased.

Wherever the farmers alone own the ditches, or where other ditches are under the control of those who show a proper public spirit, liberality and fairness, in utilizing the water they control. As one with numerous friends still living here, I regret to say that the region immediately around Borden, is the only exception I find to this general rule, although irrigation works were completed here, as you know, for quite an area of land, four or five years ago. Unquestionably enough water is supplied by the Fresno river for six or eight months every year to irrigate successfully a much larger acreage than has yet been wet here, if only those who control its canal would practice a more enterprising, conciliatory and liberal policy. Presently I shall give you some results from a small but well cultivated ranch in this county, which illustrates well the successful mode of irrigating these comparatively stiff, clayey soils, where water scarcely seeps laterally at all, until the surface has once been thoroughly soaked.

But pardon here

A Slight Diversion on Type-Setting.

As one of your numerous correspondents, I don't often worry your compositors about matters of which they know so much more than I do. Over occasional "printers' mistakes" we don't quarrel. It affords me pleasure, as one of your long-time scribblers, to testify to the very general accuracy and neatness by which the work of your type-setters and proof-readers is well known. Here, again, I am proud to say that many of them and I are personal friends, and are willing to do all we can for each other's welfare and satisfaction; but I tell you, when they let a *p* go for an *f*, and make me say a certain thing will "refute a theory," that is, I suppose, will give it reputation and make it good—when I wrote, and meant just the opposite, viz., "will refute a theory"—it is time for me to "go for them," in a mild way. That's just what they did for me in your issue of November 23d, p. 322, in 11th line, under subhead "Along King's River."

But that isn't all. In line 20, under subhead "Honey-Dew," they made me say, "from the small tubes near the end of its short body," when I wrote, "two small tubes." The allusion was not to any common tubes, but to two special tubes which such aphides have for making honey—tubes not common to all insects. Again, in the 5th line above subhead, "Indians Gather Honey-Dew," they put "tells" instead of "tell," to agree with the plural subject, "writers," in the line above. Now that's a common sort of mistake, and one don't mind it so much; but it does make it look as if a fellow didn't understand English grammar, when, in fact, he began studying it at 14 years of age, and has been trying to study it off on ever since, when he has had a chance. But I'll forgive them all this time, if they will try not to do so any more. It must have been something connected with Thanksgiving Day that caused it, for they seldom make such mistakes. If so, it is well that Thanksgiving dinners don't come too often—and here we shall drop the subject.

The Results of Irrigation.

As promised above, on stiff soil that does not

seep, as the Mussel Slough land does, is as follows:

Mr. J. H. Say has 160 acres along the Kingsburg branch of the Church ditch. Its location is two and a half miles west of King's river, eight miles north of Kingsburg, eight miles southwest of Centerville, and about 15 miles southeast of Fresno City, the county seat. The average depth to surface water there is about 50 feet, some wells in the neighborhood being 56, others 48 feet to water. Where land has been irrigated the past year, the water in wells has risen about 12 feet. Mr. Say first irrigated his land last August a year ago, when he gave it a good wetting and put in a fall crop of corn, beans and potatoes, on a small acreage. After the late January rains and early in February, he carefully plowed 33 acres of the same land and sowed and harrowed in about 60 pounds of Proper and Chile wheat per acre.

In July he cut and threshed from it an average of 36 bushels per acre of fine wheat, without any other irrigation than what he had given it the previous August, except that the ditch above referred to and the Kingsburg and Centerville ditch both run through his quarter section. He assures me that this wheat attained a height of five or six feet, and as part of it lodged, he had to leave on the ground more than a header usually leaves.

This seems to prove clearly that for most of this Fresno county land, and other soils as hard and compact, the safest way to irrigate is to soak the land thoroughly.

By Flooding Once in the Fall.

This with moderate winter rains insures a good yield of small grain. In April last, Mr. Say planted ten acres with Egyptian corn in rows three or four feet apart like common corn. For a first crop he cut off the heads late in August, securing in all about 200 bushels. He then irrigated it by running water in furrows between rows three or four feet apart. The stalks then sent out "suckers," and Nov. 29th I found him and his boys gathering a second crop which he says will amount to about 150 bushels, making a yield for the two crops of 35 bushels per acre. The yield of this corn in Tulare and Fresno county this year, varies from 25 to 50 bushels an acre under circumstances at all favorable.

Mr. Say is using

Egyptian Corn for Fattening Hogs.

And thinks it does as well for this purpose as any other grain. He also showed me a fine span of horses in the very best condition, and assured me they were kept so on two quarts of this corn per day, and alfalfa hay.

An acre and a half of Indian corn this season has made him about 75 bushels, and three acres of beans about 4,800 pounds. He has also tried one and a half acres of sorghum and made 200 gallons of syrup. He has six acres of alfalfa, sown last March; has cut it three times, getting a full ton per acre each cutting. He constantly keeps on it three cows and a yearling, in good condition. His trees are growing rapidly. From him and Mr. J. Berry, a near neighbor, I learn the useful fact, that it does little or no good to soak Egyptian corn for stock as we do barley. After soaking it for 24 hours in plenty of water, it remains unswollen, and on breaking the grains you find the meal within perfectly dry.

Mr. J. W. Carr, and Mr. Orta Garvin, in this neighborhood, have also raised fine crops of corn and sorghum this year by irrigation. The latter has leased 20 acres to a Chinaman, who will use it as a garden and plant it in various kind of trees. He was irrigating it when I passed.

The ditches above named, together with the Emigrant ditch—taken from Cold slough, a branch of King's river on its north side—and Lower King's River ditch, on the south side, are the only ones in which I have found any water running during the past three months.

Last Saturday, I saw in the town of Fresno, on the beautifully improved home of J. W. Ferguson, your confrere of the *Expositor*,

The First Ripening Oranges.

I have seen grown in the open air in San Joaquin valley. They are on a grafted tree, three years old from the bud. He has also a bearing lemon tree four years old from the bud. Mr. Ferguson has been very successful in cultivating the citrus family, and is among the first to demonstrate that they will thrive out of doors in Fresno Co. by careful culture. He has 55 orange trees, including Mediterranean sweet, Portugal, Malta Brun, Bahia and other kinds; also, five lemons and three limes, all doing well. He has an Isthmus banana tree, six feet high, uninjured by frost. It is well protected by walls of houses in the north and east.

Borden, Fresno Co., Dec. 4th. J. W. A. W.

POCKET MICROPHONE.—M. Trouve has invented a cylindrical device which resembles a small dark-lantern, with a carbon crayon instead of a candle. The device, as its name implies, is designed for collecting small sounds. When placed in the middle of a room, it reveals all secrets. It transmits the voice admirably to a receiving telephone, even when the speaker stands twenty-eight feet or more from the microphone. When a watch is placed in the interior, it seems to be making unheard-of efforts to get out. The instrument can be easily used for revealing the normal or morbid movements of the heart or lungs.

THE government of Denmark has granted the administration of Santa Cruz a loan for the purpose of restoring the sugar plantations.

HORTICULTURE.

Scintillations from the Los Angeles Fair.

EDITORS PRESS:—The last number of the PRESS contained pertinent suggestions and editorial comments on the subject of holding a fair at such season of the year as would insure a full display of citrus fruits. In a previous letter to the PRESS, the writer wrought in the edge of a similar vein. Dr. O. H. Congar, of Pasadena, has been for some time reflecting on the same subject. One point to which Dr. Congar is inclined is this: to hold an itinerary annual citrus fair, beginning, for instance, with San Bernardino county in 1879; the next year in some other county, and so on to the full circuit of all the counties of southern California. Central California might well adopt the practice of the plan for the citrus counties there. That California is destined to grow oranges as far north as Marysville, is now settled per force of facts. The writer saw oranges ripening in the open air at Marysville. That the orange tree is edible up to greater and greater hardihood in relation to frost is well settled, directly and by analogy. That the best oranges are grown where the trees sleep more restfully by reason of light frost, is asserted by the connoisseurs of certain localities of Mexico, who have the choice of oranges grown with and without frost. Central Californians, therefore, have much to encourage them to persevere in orange culture, and should hold out encouragements for holding citrus fairs—orange fairs, if you please.

The central societies at Sacramento and Los Angeles need not be in the least degree jealous of local societies. The general interest in fairs will be all the greater by reason of the local fairs, and the interest in the central fair will be greater by reason of the general interest.

In this relation the writer reasons in the light of personal experience, acquired as the Corresponding Secretary of the Horti-Agricultural Society of Alabama, within the scope of whose duties was the agitation of the subject of local societies; congratulatory letters being now in his possession referring to the multiplication of local societies throughout the State, the consequent increase of State-wide interest in soil-tillage, and this in its turn working unprecedented concentration of interest in the central agricultural societies.

Flax and Castor Beans.

Prof. G. H. Peck, of Los Angeles, exhibited at the fair flax seed grown in southern California, and alongside of it a sample grown in Oregon; holding that flaxseed grown in southern California secretes more oil than that grown in Oregon. Castor beans were also exhibited by the same gentleman.

Prof. Peck gave much valuable information during the fair in relation to the culture and profit of flax and the castor bean. These plants, the Professor maintains, pay better than corn or barley. Happening to be present at the opening of a letter addressed to the Professor, a check for a round sum came to view. "This check," said he, "is to pay for castor beans, and I can draw for two hundred thousand dollars more if the farmers of southern California could furnish me with the flax seed and castor beans to that amount." One decided merit in this connection, is the offer to contract for next year's crop of castor beans and flax seed at profitable prices, to be fixed now or at some other time at the option of the seller. Both plants flourish in southern California.

Mention of Fair Exhibits—Cherimoya.

Woodhead & Gay made a noteworthy display of limes, lemons, foliage plants, guava, banana, loquat and cherimoya trees. It was stated that the cherimoyas were in the open air all through last winter, without injury from the cold. The fruiting of the cherimoya in southern California is as yet problematical. The survival of the young plant assures the survival of the older tree, always hardier, and the survival of the grown-up tree almost assures fruit bearing. Altogether, cherimoya plants were the greatest pomological novelties at the fair. An Englishman once said, "Doubtless, Opuntia could make a better fruit than the strawberry, though doubtless, he never did." But another, better traveled admirer of the strawberry said that the cherimoya is etherialized strawberry, and the crowning glory of fruit creation. Even Mark Twain drops into that other and serious self, possibly insinuated by his *nomme de plume*, and without a scintilla of levity, eulogizes cherimoya, met with by him on the Sandwich Islands. Anything that can solemnize Mark Twain long enough to write two lines, must be in some way very impressive.

If the essentially tropical cherimoya can be naturalized here, next might come the zapote, Pomona's golden tropic custard, and then the sapadillo, Pomona's tropic honey, delightfully startling the palate nerves.

It would seem that Pomona's treasures from the East and West Indies and from tropic Polynesia, are likely to be in time through the versatility of seedling generations imbued with this small increment of hardihood necessary to grow up, and fruit bear on our genial leeward of cloud-high mountains trending across the path of the north wind.

Honey and the Honey Comb.

I. L. Lanterman of Pasadena, exhibited

comb-foundation, so much like bee-work, that the queen might deem him a worthy subject of her queenhood.

The honey exhibited by R. J. Balcom of San Diego, was so translucent, that print no larger than that of December in the date at the top of the PRESS, was easily read through a six-inch stratum of it. The extreme beauty and delicacy of Balcom's honey might inspire the poet to say, that it was like a flake of sunset caught among the clouds, and that San Diegians banquet as the humming birds. In time the imperial epicures of the East will buy San Diego honey.

C. N. Wilson of San Fernando, persuaded the bees to make honey-comb within glass fish globes. Thousands admired the delicately tinted spheres of honey-comb in shells of crystal. Grain.

I. L. Lanterman exhibited a bushel of choice wheat and a bushel of superior rye; also oats good enough to call for the reason of the almost universal neglect of that cereal in southern California. Rust very much antagonizes profitable wheat-culture in southern California. So it did in the years of first trials in Pajaro valley and other localities of central California. Rust soon disappeared there and may disappear here. Odessa wheat matured without rust at Westminster in that kind of land supposed to be most conducive to rust. [But rust is liable to reappear in almost any locality.—EDS. PRESS.]

Potatoes.

Sweet potatoes, by Albert Glass, of Vernon, and A. E. Putney, of Florence, were large and smooth.

Mr. Bangle, near Downey City, imported Cuban sweet potato seed from Mississippi the second year's crop of which retains the superior qualities of the imported seed.

Early red Irish potatoes, by H. H. Roper, of Santa Ana, peach blows, by J. D. Durfee, of El Monte, and early rose, by S. A. Waldron, of Florence, sustained the reputation of southern California for fine Irish potatoes. Some of the readers of the PRESS up north may say that they were not aware that southern California had any reputation for good Irish potatoes. Admitted that said reputation stays at home, it is high time for it to go abroad. The writer had 75 acres to Irish potatoes that in the best portions yielded 150 cents per acre. The Humboldts kept well. A car load of them was sent in April to Littlefield, Webb & Co., San Francisco, was sold at the prevailing prices there, and more ordered. Potatoes were also sent by the wagon load and car load to the Los Angeles houses of H. Newman & Co., Hellman, Haas & Co., E. Germain & Co., Moiso & Co., M. Stiebel and the Grange Store. Importations from San Francisco were entirely suspended by those houses during April, May, and a part of June, the period of marketing the Humboldts, and no customer of theirs discovered that the potatoes were in the slightest degree inferior to the best up-country Humboldts. This first demonstration on a large scale was confirmed by so many the following year that the writer saved money by leaving his second demonstration undug indefinitely. And this last case is an illustration of snare delusion, and the capacity of the wreckless soil to hear the market.

Other Products.

Large creaseless tomatoes by M. Serratt, of Florence, and the rampant tangles of volunteers on wild heather and arid sand, illustrate the adaptation of southern California to that esculent. Sugar beets by G. A. Blakeslee, of Florence, one weighing 80 pounds, were ponderous appeals for a sugarcane at Florence. Who will utilize the opportunity? Florence is on the border of the artemisia belt. Square miles of richest beet land are spread abroad. Two railways converge here, and Wilmington harbor is only fourteen miles away by rail, and Los Angeles, the present commercial and future political capital of southern California, is in the suburbs of Florence, or vice versa, at any rate. Who will put a sugarcane at Florence?

Hops, by David Lewis, of El Monte, strongly intimated that Eastern coin is liable to fairly hop about that hopped locality. But rolled butter pears and English walnuts, by J. D. Durfee, of El Monte, proved that it is not much of a hopped place after all. Parsnips and Egyptian corn, by C. N. Wilson, of San Fernando, impudently the capacity for something in addition to the ten thousand acre wheat fields of that valley. G. A. Armstrong's crook-neck squashes lost no caste because of crookedness, but were accorded an honoring position. Cheese, by Webster, Howe & Co., of Garden Grove, was good enough to touch with remorse the Californian who remains stubbornly loyal to Western Reserve. Roll butter, by W. R. Steele, of Compton, was a credit to that region of corn, pumpkins, alfalfa and Jersey cows. Steele's and Durfee's butter would be counted gilt-edge in Sutter-street market.

Indian Corn.

White King Phillip corn, by Robert Boswell, of Santa Ana, large and flinty, ought to make bread as good as people think pop-corn would make. But who knows what kind of bread pop-corn would make? An offer on the next premium list might fish out the truth. Pacific Coasters, especially on the cool seaboard north of Cape Concepcion, ought to warm up on this topic of corn-bread—the most warming of all bread. Yellow corn, by A. Travis, of Orange-thorpe; by J. P. Jones and H. H. Roper, of Santa Anna; by Daniel Boyd, of Gospel Swamp; white corn and yellow corn, by S. Washburn and A. F. Mills, of Pasadena; yellow corn, by

M. Serratt, of Florence; four large ears from a single grain of corn, and eight large ears from a single grain, by Mr. Ramsour, of Florence. These ears were large enough to shell at the rate of a bushel to the 110 ears. In both cases the ears hung on the stalk dug up by the roots. The fair-goers fairly saw how by suckering two grains of corn produced twelve ears or one-ninth of a bushel, or at the rate, if planted four feet apart, of 147 bushels to the acre. Another exhibit from Florence of 13 ears weighed twenty-nine and a half pounds. A corn-stalk from Gospel Swamp was eighteen feet high, but carried only nubbins in its husks, a neighbor of half the stature carried large ears. The Ramsour case ought not to encourage suckering, which, and too many original stalks to the hill, are the bane of many a cornfield. The corn exhibits cited were highly creditable, and converged as testimonies in support of the conclusion that in a comparison of per acre tonnage of corn southern California is in the van of the Miami valley, Ohio; Bourbon county, Kentucky; the Chucky Bottoms of Tennessee, the Canebrakes of Alabama, or Old Caney, Texas.

JOHN H. SHIELDS.

Florence, Los Angeles Co.

[General Shields writes us that one of our Eastern subscribers, R. B. Riegort, writing to him forgot to give his complete address.—EDS. PRESS.]

THE STABLE.

Breeding Horses in California.—No. 11.

[Written for the PRESS by JOSEPH CAIRN SIMPSON.]

If the foal has been handled when first dropped, taught to suck, and supported while its limbs are yet too weak to depend on itself, its first confidence in man is established. But if the mare has foaled by herself, and the foal has become strong before it sees a man, it is then timid and it requires a long time for it to become accustomed to his presence. When aided by an attendant to suck, that attendant being careful not to alarm it more than he can help, it has then no more dread of him than its mother, and as soon as it is old enough will take delight in his company. When a month or six weeks old it is a good plan to fix a light web headstall on its head, being careful to have it fitted so close that there is no danger of getting its foot between it and its head. When it has become thoroughly accustomed to wearing it, attach a rein and give it the first lessons in being restrained and guided by it. Should it struggle violently when it first discovers that it cannot get away, be careful not to check it too suddenly, but do not give up until you teach it that you are the master and compel submission. Whenever this is accomplished, soothe and pet it, and not until it is entirely over the tremor, and thoroughly reconciled, will it do to give it liberty. The first lesson thoroughly inculcated and thereafter there will be little trouble. It will soon learn to follow the guide by taking the precaution to have the mare led in advance, and if the mare is worked it can be tied by her side and walk along with her. The mare should not be harnessed until the colt is a few weeks old, and then the work must be light. The better plan is to accustom the mare and colt to short separations, by leaving the foal in the box, if possible two of them together for company, and bringing the mare in for it to nurse. One of the largest and strongest foals I ever bred was by imp. Bonnie Scotland, his dam combining the Yorkshire and Glencoe blood. She was blind, and the colt took delight in leaving her, when she would run all over the field in search of him, blundering against the fences, or any other obstacle, until I was apprehensive she would seriously injure herself. I kept her in a box for a time, but at last concluded I would put her to work. She had not been broken to harness, had been trained, but never ran, owing to an accident which injured her shoulder. By harnessing her beside a mare she was acquainted with, we had no trouble to break her, and she proved a splendid work animal. When haying time came, the foal was two months old, and he was well broken to halter, and when the mare was hitched to the mowing machine, he was tied to the ring of the hame with length of strap enough so that he could suck, and we had no more trouble with him than the other horses. There was a favorable circumstance, however, as the meadow was inside of a training track, so that the turns were on a large circle, so that it was virtually the same as going round a track. I drove the team myself, and would stop frequently, still, the amount cut in a day was not a great deal less than the average. I lived in Iowa at the time, and Bonnie Scotland was owned and kept at Lancaster, Ohio. I sent the mare early in the spring, the dam of the celebrated Duke of Magenta accompanying her, and they remained there the greater part of the summer. Lady Lancaster at once took charge of the blind mare, and for the whole time she was there, she watched her as carefully as a man could have done. She would not permit any of the other horses to come near her, and would pilot her to the water and back, and under the shade trees

when the sun was shining too hot for comfort. But this is a digression from the halter breaking. When the foal is weaned, it is a good plan to keep him tied near his mother, and if he has been accustomed to being securely fastened, he will know by this time that it is useless for him to attempt to get loose. The mare must be milked, but only a portion of the milk drawn, in order to check the flow. Care must be taken that the udder does not cake, and a very good application when that is threatened is soft soap rubbed on the bag. The object of keeping her foal in sight, during the first part of the training, is to prevent her from fretting, which would increase the tendency to feverish symptoms, and as the food must be dry, there is apt to be slight febrile action when everything progresses favorably. When the foal is five months old, or between that age and six months, is the time to wean, if the mare be again in foal; if not, it can run longer with her. At five months the foal will be able to eat all that is necessary to keep it growing, and mashes made of scalded oats and a little flaxseed, linseed meal, or wheat mixed, will make up for the loss of milk. In tying the colt, the safest plan is to have a weight on the end of the halter strap which will overcome the slack, and do away with the danger of getting the foot over it. But if the colt is left alone, a better plan is to have a division in the box high enough, so that there will be no temptation to jump over, and yet so they can see each other. If there are several colts to wean, by keeping them together they much sooner forget the loss of their dams, and a few days will suffice to attract their attention when they have company. But if a colt has been uniformly treated with kindness, it will have acquired a friendship for those who have been with it, and will not pine nearly so much as one which has not been kindly treated. Paddocks, or small fields, are an absolute essential on a horse-breeding farm, and during weaning time they can scarcely be dispensed with. When many foals are kept together, there will be some which will master the others, not only keeping them away from the feed, but tormenting the weaker ones with a pertinacity that is provoking. These must be separated, and it is also desirable to divide the sexes. The fillies are more timid, and not so much inclined to plague each other, so that quite a number of them can be kept in one enclosure. In the East it is imperative that the young things have a warm building in which they must be kept the greater portion of the time during the first winter. In California, any building which will keep the wind and water out is sufficiently warm, and this is one of the greatest advantages the climate gives. There is a very trifling difference between the temperature of out-doors or in, and when it is not raining the foals can be in the open air. It is the grand invigorator, and that and the exercise, which is stimulated by the quantity of nourishing food, keeps them in robust health. During the winter the halter lessons should be continued, and some advise permitting the halter rein to drag on the ground when they are running in the paddock. These claim that it accustoms them to ropes or reins dragging about their legs, and when the intention is to picket horses out the plan would be a good one. But with racing colts I would be apprehensive that in playing the rope might encircle the legs, so as to give the animal a severe fall, or, perhaps, wound the pastern, and therefore I would prefer only leaving the headstall on. Should any of them be difficult to get hold of when wanted, a light pole with a snap on the end can be used to catch the halter ring; but if the treatment has been such as recommended from the first, they will come up as readily as a pet dog. When the rainy season has passed, the yearling colts can run in a field by themselves, and the fillies may be kept with the brood-mares.

An important matter is to look after the shape of the feet closely. The wall should be kept rasped down so as to have a uniform bearing, and the whole kept shortened, which will prevent it breaking. I have known horses have crooked legs, occasioned by neglecting the feet when young, and a wrong set of the limb, however trifling, is a great detriment to the race-horse. The colts well educated to the halter, their feet should be frequently handled, the utmost care being taken to avoid frightening them; and though it is necessary to compel obedience when they endeavor to break away from the restraint of the halter, it will not do to hang too doggedly to the foot. Frequent trials are better, and when the animal is eating it will usually permit the foot being held up long enough to rasp it into shape. In some cases the horn is irregular in growth, one side growing more rapidly than the other—the toe having a superabundance of horn, while that at the heel is of slow development. A little practice will give the operator a correct idea of what is to be done, and, when joined to a careful study of the foot, its anatomy and functions, he will perform the job knowingly.

When from sixteen to eighteen months old, the colts must be taught other lessons, which will be the subject of the next paper.

FOLDING FANS were invented A. D. 670. The fan which opens and shuts is a distinct unchallenged Japanese production, the model being a bat's wing. So various are its uses in Japan for artistic decoration, in etiquette, in war, in peace, in literature, and in ways unknown in other countries, that Japan has been called the "fan country."

PATRONS OF HUSBANDRY.

Correspondence cordially invited from all Patrons for this department.

National Grange Meeting.

We continue our report of the late meeting of the National Grange at Richmond, Va., drawing from the columns of the *Charleston News and Courier*, of which Bro. D. Wyatt Aiken is agricultural editor and a member of the National Grange.

Seventh Day.

Mr. Sims, chairman of the finance committee, referred various accounts which had been reported to them—all of which were concurred in.

Mr. Eshbaugh, chairman of the committee on mileage, reported the amounts due to each member for mileage and the number of days consumed by each in making the round trip. The estimate for the number of miles traveled by the member from Oregon in coming and returning was 7,950 miles, with 28 days on the road.

Mr. Aiken, chairman of the committee of claims and grievances, made report of certain papers entrusted to them, amongst which were the accounts of the late Secretary, which they had adjusted satisfactorily to Mr. Kelley. The report was concurred in.

Reports were made on several other cases which have, some of them, for a number of years been before the Grange. They are now all cleared up, and the committee deserve much credit for their labors in adjudicating them and getting them into a shape for action by the Grange.

On motion, the hour of 9 o'clock during the evening session was set for the exemplification of the unwritten work of the Order in the first four degrees.

Speeches were, on motion, limited to five minutes during the remainder of this session, and the hour for the beginning of the morning sessions fixed at 9 o'clock.

The following resolution was passed:

Resolved, That no per diem will be paid the members of the Grange for the time consumed in the excursion to Norfolk.

The thanks of the Grange were tendered the member from Oregon for the valuable specimens of the products of his State which he had displayed in the Grange.

In the annual report of the Lecturer, he makes certain suggestions and criticisms upon the actions of members of subordinate Granges in some localities in accepting candidacy for partisan political office. This is strongly condemned by him as tending to disorganize the members and disrupt the Grange.

This seems to have created some degree of feeling amongst some of the members of this Grange, and the report has been very strongly commented on. It has been up more than once and discussed, and was called up again this morning.

Whenever the report has been assailed, its author has warmly and strongly defended it. On the subject of co-operation, the views and recommendations of the Lecturer have also met with opposition and been productive of much discussion. The two subjects were again before the Grange, and after remarks by a number of members, and before reaching a conclusion on either of them, the Grange took a recess until 3 o'clock—placing the report again on the special order.

The matter was taken up again during the afternoon session, and the following—being that part of the report of the committee on the good of the order (Mr. Moor, of Maryland, chairman)—relating to the subject was adopted unanimously.

"Your committee feel constrained to disagree with our worthy Lecturer in his views as regards members of our Order in the capacity of citizens accepting positions of honor and trust from political party organizations. We cannot believe that it has been productive of harm either to the Order or to our country. The Order certainly cannot pretend to deny to its members the highest rights of citizenship, nor does it deny to any member the right to a full discussion of any question affecting the body politic. Your committee are unwilling to disapprove of the conduct of worthy members of the Order who have accepted these positions of honor and trust at the hands of the people; but it is a duty resting upon us as citizens and members of this Order to secure, maintain, and uphold good government in our country."

The term used by the Lecturer in his report was "leading Patrons"—not "members of the Order."

Afternoon Session.

The presence of Mr. Wm. Saunders, of Washington, the first Master of the National Grange, was announced by the presiding officer. Mr. Saunders said that he came here as the bearer of a communication from the Commissioner of Agriculture at Washington, asking that closer and more intimate relations be entered into between the Patrons and the department, and deputizing him to represent the department in this meeting of the farmers of the country. He also bore an invitation from the Commissioner to this body to visit the department to call in a body on the President, who was anxious to meet them. The letter was or-

dered to be spread upon the minutes, and referred to the committee on the good of the Order, for them to present some plan by which suitable response may be made to it.

Mr. Moore, from the committee on the good of the Order, reported, recommending that the next meeting of the National Grange be held at 10 o'clock A. M. on the third Tuesday in November next, in the town of Canandaigua, N. Y. Several other names being proposed, showing the Grange was not ready to select a place for meeting, the matter was laid over for the present.

Some discussion was had as to the location of the office of the Secretary, and without action the subject was indefinitely postponed.

The committee on the good of the Order reported adversely to the purchase of a place for the meeting of the Grange and the location of the Secretary's office.

The committee on finance made several important reports, which were all concurred in.

The committee on accounts reported one or more accounts which they had audited, and which were concurred in by the Grange.

Messrs. Aiken and Forsythe, members of Congress, were appointed to present the memorial to Congress ordered by this Grange to be so presented.

The committee on resolutions reported back the resolutions on the tobacco tax offered by Dr. Blanton, of Virginia, and recommending their adoption.

As the subject matter was one not well understood by the members generally, a motion was made to refer the subject to a special committee of three.

On this subject Dr. Blanton strongly opposed this reference, as being a question of principle far above that of dollars and cents. Tobacco stands upon a different footing from any other product of the farmer. We claim that taxation must be equal on all the great staples. He warmly defended his resolutions and strongly urged their adoption.

The motion to refer was concurred in.

Amendments to the Constitution.

The following was offered by Mr. Lang, of Texas, viz:

Amend the Constitution of the National Grange under "Organization of State Grange" so as to read as follows:

State Grange, section 1, fifth degree, Pomona (Hope), composed of representatives elected by the subordinate Granges: Provided, that when the subordinate Granges in any State become so great as to render it necessary, such State Grange may in such manner as it may determine reduce its representation.

Sec. 2. Fourth-degree members in good standing are eligible, and may be elected as representatives in a State Grange.

The Grange then took a recess until 9 o'clock at night to hear the Master exemplify the unwritten work of the Order in the first four degrees.

[We expect to complete this report in our next issue.—EDS. PRESS.]

Election of Officers."

ELLIOTT GRANGE, No. 183.—Election December 14th. T. J. Greene, M.; James Lamb, O.; Mrs. J. J. Emslie, L.; F. Ritter, S.; C. Lamb, A. S.; Mrs. J. Ritter, C.; C. M. West, T.; H. Adams, Sec'y.; R. Misener, G. K.; Mrs. M. A. West, Ceres; Mrs. M. Greene, Pomona; Miss Jennie Lamb, Flora; Mrs. S. Lamb, L. A. S. Installation January 11th, 1879. II. Adams, Sec'y., December 16th, 1878.

SANTA MARIA GRANGE, No. 52.—Santa Barbara county. Election Dec. 6th: G. W. Lewis, M.; Joel Miller, O.; J. J. Holloway, L.; R. D. Cook, S.; B. T. Wiley, A. S.; M. H. Stephens, C.; Elizabeth Harris, T.; Mrs. R. T. Holloway, Sec'y.; M. D. Miller, G. K.; Mrs. C. Miller, Ceres; Mrs. Jennetta Cook, Pomona; Mrs. Mary Stephens, Flora; Mrs. Sarah Linebaugh, L. A. S.

SURPRISE VALLEY GRANGE, 265, MODOC CO.—Election, Dec. 18th: E. L. Wood, M.; S. Daniels, O.; Wm. Brown, L.; E. Wilkerson, S.; J. R. Sweet, A. S.; T. H. Garrett, T.; J. S. Linseott, Sec'y.; Wm. Ford, G. K.; Sister B. S. Linseott, Ceres; Sister Mary Daniels, Pomona; N. A. Chapin, Flora; F. W. Chapin, L. A. S.; T. H. Garrett, Trustee for three years.

SUTTER MILL GRANGE, at COLOMA.—Election December 6th: G. W. Ramsey, M.; R. C. McKay, O.; Wm. Nichols, C.; C. E. Markham, L.; Jas. Crocker, S.; L. W. Valentine, A. S.; E. M. Smith, T.; H. Mahlor, Sec'y.; Jos. Barnes, G. K.; Mrs. W. H. Valentine, Ceres; Miss Annie Hume, Pomona; Miss Sarah McKay, Flora; Miss Ella DeLory, L. A. S.; Wm. Stearns, Trustee.

WASHINGTON GRANGE, No. 228, CALAVERAS COUNTY.—Election, December 7th. W. B. Stemper, M.; Nelson Dill, O.; A. A. Van Sandt, L.; M. L. Cook, C.; S. O. Sollars, S.; J. C. Blyther, T.; Ed. Walker, A. S.; C. Bamert, Sec'y.; Miss Josie Stemper, Ceres; Miss May Parrott, Pomona; Miss Rosa Stemper, Flora; Mrs. Mary Miller, L. A. S. Installation, January 4th, 1879.

The Ameer has backed out of the war. He leaves his son to settle affairs with England.

The funeral services of the late Bayard Taylor took place in Berlin on Dec. 22d.

AGRICULTURAL NOTES.

California.

COLUSA.

WHEAT SPROUTED FIVE TIMES.—*Sun*, Dec. 21: W. J. Clark, of College City, sends us the result of one of the most valuable experiments ever tried in this State. Seeing in the *Sun* the discussion of the subject of the power of wheat to send up a second sprout, after the first had died, Mr. Clark went to experimenting with it. He inclosed us a sample, and wrote: "Inclosed please find two grains of wheat that I have been experimenting with for the last six weeks. The present sprouts that you will find on them are the fifth that have been by me sprouted! They were each time dried off until there was nothing of the sprouts left and then placed in water again. One time they lay in a saucer, in a window, ten days to dry, and the grain turned black and seemed entirely parched with the heat of the sun, through the glass, but to my astonishment, after placing them in water, they again sprouted. I am, therefore, thoroughly convinced that wheat, after sprouting and becoming dry, will sprout again." This experiment has cost Mr. Clark nothing, but it has given a world of valuable information to the farmer. Let others confirm it for themselves, and give us the result, but Mr. Clark's word is as good to us as though we had seen it with our own eyes. This may relieve a great many farmers who are now fearful of the effect of the drouth on their sprouted grain.

CONTRA COSTA.

WORK.—*Gazette*, Dec. 21: The weather still continues dry, clear and cold, and without any present promise of rain, though good hope is cherished that it will come before New Year's, and that January will give the farmers favorable weather with ground in good condition for plowing and sowing. Hill adobe ground yet plows well in many situations, and a good deal of it has already been seeded, while the plows are kept at work, as the rain holds off, preparing more of it for seeding—although it will be at risk of its yielding foul crops, as but a small portion of the weed seeding can have been started by the light rain of last month.

FRESNO.

WATER RATES.—*Expositor*, Dec. 18: The Central California colonists have at length concluded a treaty of peace with the power controlling the water canal that supplies the colony. It is agreed on the part of the colonists that they will pay \$37.50 back water dues, at some time between now and the 15th of January, and \$50 per year during the next two years; and also \$12.50 per year for keeping the ditches in repair. By this settlement the Central colony again takes its place as the "boss" colony of the State, as now its water rights there are none to dispute. The people can now go on and improve their places, with an absolute certainty that they will have water, and it matters not whether Church or Chapman wins in their suits at law.

LAKE.

BACON.—*Democrat*, Dec. 21: It may be imagined by some farmers in this county that curing bacon and hams will not pay. In this they are much mistaken, as there is and always has been a market for Lake county bacon and hams, which have a name all over the State. The Napa Con. quicksilver mine has recently purchased 1,000 pounds of bacon of D. V. Thompson, and would gladly have bought more. Very little effort on the part of producers would make this branch of farming profitable, if it were only known that Clear Lake bacon could be had in large quantities.

LOS ANGELES.

WINE PRICES.—*Outlook*: L. J. Rose, of San Gabriel, has purchased a great deal of wine in Anaheim lately. It is said that he paid from 18 cents to 20 cents per gallon for white wine, and from 40 cents to 45 cents for angelica and port.

MENDOCINO.

FAIR.—*Ukiah Press*, Dec. 21: It seems that Willitsville means business in its organization of a county agricultural society with the fair to be held there. It seems strange that such an enterprising and prosperous county as Mendocino should have been so long without such an association, and the present movement may be accepted as evidence that the people are awakening to the necessity of such. But it is a sad commentary on the county seat that Willitsville should take the lead in this matter, and it is to be hoped that the citizens of Ukiah will not remain idle.

MONTEREY.

EDITORS PRESS.—No rain yet. Everybody is dry plowing and sowing and hoping for rain.—J. W. J., Paraiso Springs.

NAPA.

CHRISTMAS GREENS.—*Reporter*, Dec. 21. We have been having fresh green corn again this week, which we mention to verify our oft-repeated statements in regard to the existence on our mountain sides of a warm belt of climate, where garden stuff frequently continues to flourish until Christmas, and where frosts seldom appear.

ORANGE PLANTING.—Mr. Charles Krug proposes to put out a large orange orchard on his place near St. Helena, to which he is moved in consequence of having a number of years since

planted some orange trees, which have now commenced to bear, thus furnishing indisputable evidence of the adaptability of the soil and climate for orange culture. Oranges will grow as well in our warm valleys, a short distance from the cold winds, as in Los Angeles, and we are not compelled to irrigate.

SAN BERNARDINO.

PISCICULTURE.—*Index*: Quite a number of our citizens are recently taking a renewed interest in the science of pisciculture and are preparing pools for the propagation of trout, carp and other fish. Mr. B. B. Harris, Alexander Nickerson and Baca Bros. have had pools in operation for some time and have raised some fine fish. Mr. M. B. Garner has just completed a good-sized pool and supplied it with young carp. W. A. Harris, Esq., has also just finished a pool 30 feet long, cemented all around, and has five young carp in it. Mr. Waterman, at the Hot Springs, is also preparing two large pools and will propagate both trout and carp.

SANTA CLARA.

GROWTH OF EGYPTIAN CORN.—*EDITORS PRESS*:—After one year's experience with the Egyptian corn, I can say that on our warm southern hillsides it will grow more bushels of grain per acre than any other grain, while on our northern more cold hillsides it is rather slow in ripening its seed. Warm sandy ground is where the Egyptian corn will grow best.—Wm. PFEFFER, San Jose.

SOLANO.

THE GRAIN CROP.—*Chronicle*, Dec. 21: Although the farmers all want rain we cannot learn of any grain fields in the county which are actually suffering for it. The cold weather has tinged some of the shoots a lively yellow, but it has also brought evaporation to nearly a standstill, and thus made it more possible to do without additional moisture.

SONOMA.

EARLY LEAVES.—*Petaluma Argus*, Dec. 21: From our exchanges and from observations in this vicinity, we notice that many trees are coming out in leaf. In the upper part of the county cherry trees are in full bloom and the same is true in Napa county. Oak trees are also becoming green, as are almond and apple trees in this section. This is no doubt owing to the season, but what the particular cause is, has not yet been ascertained.

STANISLAUS.

IRRIGATING.—*Stanislaus News*: We understand that most of the farmers of the West Side, who have lands situated under the San Joaquin ditch, are feeling comparatively easy in relation to the weather. Many of them are already flooding their lands, previous to plowing for wheat. With the soil once thoroughly soaked, it will, afterwards require but a comparatively small amount of rain to mature a crop of either wheat or barley. For flooding the lands once, either during the fall or winter months, the company charges the farmer \$1.25 per acre. A friend from near Hill's Ferry informs us that a great number of farmers are now at work under the ditch, flooding and plowing their lands previous to sowing to wheat. All of those with whom we have conversed are sanguine as to the results. Even should there be heavy winter and spring rains, they are confident that the thorough flooding they are now giving their lands, will prove a benefit by the enhanced yield of grain they will harvest. The irrigated area has been extended this season from the Cottonwoods to the Orestimba, a distance of about 20 miles. Hence, the little town of Hill's Ferry, in this county, will reap no small amount of prosperity from the chance.

YOLO.

STRAWBERRIES AND ICE.—*Mail*, Dec. 21: E. L. Little, who has a nursery a short distance east of Woodland, exhibited to us, on Saturday last, a box containing a few branches of strawberry vines, just taken from the ground where they had been growing in the open air. These vines contained berries in all stages—from the large and luscious ripe berries to the bloom—fragrant and healthy. It may be a little strange to some of our readers when we state that on the same morning in which he took these vines from the ground ice was found on standing water over half an inch thick, and the people were going about dressed in heavy overcoats. But this is California.

FELLING TREES BY ELECTRICITY.—The destructive effect of a stroke of lightning upon a tree has led an ingenious gentleman in India to test the value of artificial electricity in cutting down trees. The two ends of the copper wires of a galvanic battery were connected with platinum wire, which of course became instantly red-hot, and was then passed backward and forward across the trunk of the tree to be felled. Unfortunately the platinum wire at hand was too fine for the purpose, and was consumed long before the work was accomplished. But the tree was sawn one-fifth through, and there seems to be no reason to doubt that with larger wire and a battery of suitable strength the axe and saw may find a formidable rival in electricity. It is calculated that a tree which requires two hours to fell with an ax may be brought down in 15 minutes by the new process, and that without sawdust or waste of wood in chips. A patent for this mode of felling trees was taken out in this country some two or three years since; but we have had to wait for the "ingenious gentleman in India" for the first effort at a practical method.

PATENTS AND INVENTIONS.

List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch from Washington, D. C.

FOR THE WEEK ENDING DECEMBER 10TH, 1878.

ORE WASHERS.—Frank A. Huntington, S. F.
ORE STAMPS.—Frank A. Huntington, S. F.
CAR TRUCKS.—James G. Tait, Stockton, Cal.
LOADING AND UNLOADING SHIPS.—H. P. Tothammer, S. F.
LAWN RAKES.—John Weichhart, S. F.
SPARK EXTINGUISHERS.—James H. Bartlett, Woodland, Cal.
STREET SWEEPERS.—Charles W. Cunningham, S. F.
HINGES.—Henry E. Griffin, Olympia, Washington Ter.
PUMP VALVES.—Eugene Hawks, San Diego, Cal.
PUMPS.—William C. Nelson, Vallejo, Cal.
TEAS.—Trademark—Griffin & Co., S. F.
SELF-MEASURING AND SCALE PACKAGE.—Label—Guittard & Co., S. F.

Life Insurance.

It is probable that at this present time the doctrine of co-operation, which is at the root of human progress, finds its most beneficent illustration in life insurance. The development of insurance in all its forms has been one of the prominent features of this century. We have insurance against death, against accident, against fire, against shipwreck, against all possible perils and all manner of losses.

We put up lightning rods to insure us from the electric bolt, and the doctor vaccinates to insure from the danger of a fearful disease. But all forms of insurance are of really trifling value as compared with life insurance. Other insurances can only be looked at from a pecuniary, economical and business point of view. Life insurance occupies a higher and nobler position. If the property of a citizen is destroyed by fire, and he has no insurance, his energy and industry may in time retrieve the loss; but when death takes away the bread-winner from his family, the loss is total and irreparable. If that fatal day has not been provided for, what follows to a family? What can follow, but unexpected privations—possibly the breaking up of a home, separation, and dependence upon the cold charity of the world.

We hold that no man—no matter how healthy nor how wealthy—who has any one dependent upon him, has any right to be uninsured. In our speculative country and age, the rich man of to-day may be the poor man of to-morrow, and vice versa.

Every reader can recall the name of some acquaintance, who, insuring when he never deemed his family would need the amount, has died, leaving them the insurance money as their only portion. It has been fashionable of late years to sneer at life insurance companies as mushroom institutions about on a par with lottery offices, and this has been especially the case on the Pacific coast.

It has happened that almost all of the half dozen companies that since the panic have failed in the Eastern States did a large business on this coast, and consequently our people have been extensively suffering; but if these will look at the position of savings banks, railroad, manufacturing and other corporations of the Eastern States, they will notice that the life insurance companies have more successfully weathered the storm than any other moneyed organizations.

The fact is the more business a company did, with currency at 50 cents to 75 cents on the dollar, the worse it was. The funds were loaned on real estate at inflated figures, and when the inevitable period of contraction came, the loss cut both ways, by shrinkage in nominal assets and by paying death losses in currency at par with gold. Under these circumstances the fact that so few companies failed entirely or were obliged to scale their liabilities is the greatest tribute to the inherent strength of the system. We have one company in our midst that has escaped all such perils. We refer to the Pacific Mutual Life of California. For more than half a score of years it has done business on a solid gold basis, insuring the lives of our neighbors and friends, paying its death losses promptly and without expense to the beneficiaries, and investing its funds in loans on farming lands, the best of all securities.

The company is now offering a new form of cheap insurances, running in terms of from 20 to 30 years. This is a form of protection for the most critical period of a man's life, when he is exposed to the vicissitudes of trade and probably has a young and dependent family. It is cheap and meets a want long felt in the business. We believe to-day that if every farmer and fruit-grower in the land had a policy of insurance upon his life, moderate in amount according to his circumstances, in some thoroughly reliable company, it would be better for himself, his family, and society generally. To all who read this and who think of acting on it, we cordially and with a full knowledge of its management and resources, recommend the Pacific Mutual Life Insurance Company of California.

PREPARATIONS are making for the return of 100,000 more Russians from Turkey.

THERE is great suffering among the poorer classes in Europe.

S. F. MARKET REPORT.

NOTE.—Our trade review and quotations are prepared on Wednesday of each week (our publication day), and are not intended to represent the state of the market on Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, December 24th, 1878.

All interest is engrossed in the holidays. In articles of local consumption trade has been quickened, but without advance in rates, except a slight one in Poultry. Turkeys are abundant, and prices lower than usual at the holidays. In Wheat and Barley there has been a fair trade, but chiefly at old prices.

Eastern Grain Markets.

CHICAGO, December 21.—Markets have been unusually steady in accordance with the custom of the holiday season. Wheat was, on the whole, rather lower, though there were some spurts to show that vitality still exists in the trade despite belief that it is being manipulated. Keene has gone back to New York, and whether his reported heavy transactions will influence the market to a heavy rise between this and spring depends chiefly on the amount of receipts. Sales of February were made at \$2½¢, closing at \$3½¢. Corn was about lifeless, very few deals being made, and they being very quickly closed. Sales of February at \$1¼¢@1½¢, closing at the inside price. Oats were dull to staidness, the only sales being at 20¢@20½¢, closing at 20½¢. Cash Barley, 96¢@\$1. Rye, 44¢. The Provision market has attracted most attention, on account of continued contraction in values and the weak state in which the market closed to-night. The prices to-day were the lowest ever known, even as late back as 1878, when, without exit for Produce and Provisions, rates at all Western points were a trifle better than now. Speculators who have followed the market down predict better prices in the near future, although the unprecedented number of Hogs coming into market do not, it must be confessed, strengthen faith in their judgment. February Pork sold at \$7.67½¢@7.95; February Lard, \$5.32½¢@5.67½¢, closing at \$5.55.

The Foreign Review.

LONDON, December 17.—The *Mark Lane Express* says: The cold weather has proved salutary to winter Wheat in this country and in France. Farmers continue to market their Wheat with some freedom, but notwithstanding the improved condition of offerings, trade is very flat in a majority of provincial markets, as millers are disinclined to add to their stocks at the close of the year. An equal dullness has marked the London trade. Foreign Wheat, of which imports are now much smaller, has been dealt in sparingly, but despite the limited nature of demand, business has not lacked some features of steadiness, except in Oats, continued heavy arrivals of which cause prices to drop. All varieties of feeding Corn sold slowly at last week's currencies, and the steadiness shown has been more apparent in the general tone of trade than the actual amount of business transacted.

Eastern Wool Markets.

Boston, December 21.—Wool is quiet, the total sales of the week amounting to 1,564,200 lbs, the largest for some weeks, but the bulk of these sales was brought about by concessions, and prices for desirable Wools ruled low. Manufacturers, with few exceptions, are purchasing as sparingly as possible, and holders are disposed to meet the market at lower prices. Some of the leading mills are taking advantage of the present dull state of trade and continue to bear down prices, hoping to stock up sufficiently ahead at low figures to bridge over the year, and in this they have partially succeeded, although there is no great pressure to sell on the part of holders. Sales include Wisconsin X, at \$2.33¢; Ohio X, 33¢@35¢; XX, 32¢@34¢; XX and above, 34¢@36¢; Pennsylvania XX and above, 33¢; Michigan X, 32¢; medium, 35¢; No. 1, 34¢; No. 2, 30¢; Wisconsin, 31¢@32¢; Georgia medium, 34¢; New York, 30¢; Western extra, 33¢; Maine fleece, 35¢; combing and delaine fleeces, 37¢@39¢; unwashed, 27¢@28¢; Kentucky combing, 25¢; pulled super, 33¢@39¢; Texas, 23¢@26¢; California Fall, 12¢@22¢; Spring, 19¢@27¢.

BAGS—There is nothing new in trade or prices.

BARLEY—Sales have been more lively. The following transactions are reported: 100 sks common Brewing at \$1.15; 200 do good Bay Feed at \$1.02½; silver, 2,000 do choice Feed, in warehouse, at \$1.05; 3,000, 1,200 and 13¢ do good Coast Feed at \$1; 1,000 do do at 97½¢; 400 do light and 1,100 do seedy at 92½¢ @ ctl.

BEANS—An improvement in prices induced an increase of shipments, and the market has gone backward for the week. We note sales of 100 sks Small White at \$3.05, 192 do at \$2.25 for Small Butter and \$1.75 @ ctl for Pink and Bayo.

CORN—There is no change.

DAIRY PRODUCE—The recent advance is well maintained, as receipts of Fresh Butter are small and well cleared off each day.

EGGS—Also hold their last week's advance and are firm. The demand is good.

FRUIT—California Oranges of good quality are now arriving, though many of the early shipments are too green to be of any value. The price seems to be starting in at \$35 for good lots. Pears and Grapes have advanced; Strawberries have dropped out of the market for the first time since last spring.

HOPS—There is no change here. Emmet Wells, in his circular of December 13th, remarks upon the New York trade as follows:

The decline in the price of low and medium grades, as noted in our last, has resulted in a somewhat increased demand; but as there is no scarcity of this class either here or in the interior, prices are perfectly easy. For very choice export Hops 13c to 15c is still paid, but buyers meet with much difficulty in finding quality to suit. A large proportion of the shipments to Europe this week were California Hops.

ONIONS—Unchanged.

POTATOES—Prices have had a slightly lower tendency during the week, but to-day they are not much changed from last week's figure.

POULTRY AND GAME—The receipts of Christmas Fowl have been ample, and the streets are lined with stalls of amateur retailers. The ruling street prices for Turkeys are 27¢@28¢ @ lb; the lots brought about 20¢ at first hands.

PROVISIONS—There is no change in values.

WHEAT—Trade has covered a fair amount of Wheat at the old prices. We note sales: 14,000 sks choice Shipping and 1,000 do very good Milling at \$1.75; 400 and 1,200 do fair Shipping, and 700 do fair Milling at \$1.70; 800 do Shipping at \$1.60; 2,500 do off-grade at \$1.55 @ ctl.

WOOL—The market is unchanged, and there is little being done.

DOMESTIC PRODUCE.

[WHOLESALE.]

TUESDAY M., December 24, 1878.

BEANS & PEAS.		Almonds, hd sh lb	7 @ 8
Mayo, ctl.	1 75 @ 2 00	Soft sh lb	14 @ 16
Butter	2 25 @	Brazil	12 @ 14
Pea	3 12 @ 3 25	Pecans	12 @ 15
Red	1 85 @ 1 95	Peanuts	4 @ 5
Pink	1 75 @	Filberts	15 @ 16
Small White	2 75 @ 3 05		
Large	— @ 4 75	ONIONS.	
Field Peas	1 00 @ 1 25	Alviso	3 25 @ 3 50
Northern	3 @ 4	Union City, ctl.	3 25 @ 3 50
		San Leandro	3 25 @ 3 50
BROOM CORN.		Stockton	3 25 @ 3 50
Southern	2 @ 2½	Sacramento River	3 25 @ 3 50
		Salt Lake	— @ 2 75
CHICORY.			
California	4 @ 4½	POTATOES.	
German	6 @ 7	Petaluma, ctl.	1 25 @ 1 37½
DAIRY PRODUCE, ETC.		Humboldt	1 12½ @ 1 37½
BUTTER.		Cuffey Cove	— @ —
Cal. Fresh Roll, lb	30 @ 35	Early Rose	1 87½ @ 2 00
Fancy Brands	35 @ 37½	Half Moon Bay	— @ —
Pickle Roll	— @ —	Kidney	1 12 @ 1 37½
Firkind	— @ —	Sweet	— @ 1 50
Western	12½ @ 17	POULTRY & GAME.	
New York	— @ —	Hens, doz.	5 50 @ 6 00
CHEESE.		Roosters	5 00 @ 6 00
Cheese, Cal. lb.	8 @ 12½	Broilers	3 00 @ 5 00
Gilroy Factory	11 @ 13	Ducks, tame	7 00 @ 9 00
N. Y. State	16 @ 17	do, Mallard	— @ 2 50
EGGS.		Geese, pair	2 50 @ 3 00
Cal. fresh, doz.	35 @ 37½	Wild Gray, doz.	— @ 2 00
Ducks	25 @ 30	White do	— @ 1 50
Oregon	— @ —	Turkeys	19 @ 24
Cal. do	18 @ 25	do, Dressed	21 @ 22
Eastern	27½ @ 30	Saupe, Eng.	— @ 1 50
do by express	27½ @ 30	do, Common	50 @ 75
Pickled here	25 @ 27½	Quail, doz.	75 @ 1 00
FEED.		Rabbits	1 50 @ —
Barley, ton	— @ 12 00	Hare	— @ 2 50
Corn Meal	24 00 @ 28 00		
Hay	7 50 @ 16 00	PROVISIONS.	
Midlings	30 00 @ 34 00	Cal. Bacon, Hvy lb	9 @ 10
Oil Cake Meal	34 00 @ —	Light	10 @ 11
Straw, bale	50 @ 70	Lard	9 @ 11
FLOUR.		Cal. Smoked Beef	8½ @ 9
Extra, hbl.	5 12½ @ 5 50	Shoulders, Cover'd	7 @ 7½
Superfine	4 00 @ 4 25	Hams, Cal.	12 @ 12½
Graham, lb.	2½ @ 3	Dupe's	14½ @ 15
FRESH MEAT.		None Such	14½ @ 15
Beef, 1st quality, lb	5 @ 6	Amos	— @ —
Second	4 @ 4½	Whittaker	— @ —
Third	3½ @ 4	Magnolia, old	— @ 12
Mutton	3 @ 4½	Reliable	14½ @ 15
Spring Lamb	5 @ 6		
Pork, undressed	3½ @ 3¾	SEEDS.	
Dressed	5½ @ 5¾	Alfalfa	5 @ 14
Veal	4½ @ 5	Canary	14 @ 15
Milk Calves	6 @ 6½	Clover, Red	15 @ 16
do, do	6 @ 7½	White	50 @ 55
GRAIN, ETC.		Cotton	50 @ 10
Barley, feed, ctl.	85 @ 100	Flaxseed	3 @ 3½
Brewing	1 15 @ 1 30	Hemp	9 @ —
Chevalier	1 75 @ 1 90	Italian Rye Grass	35 @ —
Buckwheat	25 @ 50	Perennial	35 @ —
Corn, White	1 00 @ 1 10	Millet	10 @ 12
Yellow	1 00 @ 1 10	Mustard, White	2½ @ 3
Small Round	07½ @ 10	Brown	14 @ —
Oats	1 25 @ 1 50	Rape	3 @ 8
Milling	1 60 @ 1 75	Ky Blue Grass	17 @ 20
Rye	25 @ 30	2d quality	16 @ 18
Wheat, Shipping	1 62½ @ 1 80	Sweet V Grass	1 00 @ —
Milling	1 67½ @ 1 80	Orchard	25 @ 30
Off Grades	1 40 @ 1 60	Red Top	13 @ 15
HIDES.		Hungarian	5 @ 10
Hides, dry	15 @ 16	Mesquite	— @ 25
Wet salted	7½ @ 9	Timothy	7 @ 8
HONEY, ETC.		TALLOW.	
Beeswax, lb.	30 @ 31	Crude, B.	7 @ 7½
Honey in comb.	11½ @ —	Refined	9 @ 9½
do, No 2	8 @ 9	WOOL, ETC.	
Dark	8 @ 9	FALL.	
Strained	4½ @ 5½	Oregon	— @ —
HOPS.		South Coast, do.	9 @ 11
Oregon	— @ —	Sac and Northern	11 @ 15
California	8 @ 12½	Mendocino & Hum-	— @ —
Wash. Ter.	8 @ 9	holdt	16 @ 17½
Old Hops	3 @ 5	Southern, hurry	8 @ 9
NUTS—Jobbing.		Northern, do	11 @ 12
Walnuts, Cal.	4 @ 6	Oregon, Eastern	16 @ 18
do Chile	6½ @ 8	do, Valley	21 @ 22

FRUITS AND VEGETABLES.

[WHOLESALE.]

TUESDAY M., December 24, 1878.

FRUIT MARKET.		Peaches	7 @ 8½
Apples, box	30 @ 50	do pared	18 @ 20
Bananas, hch.	3 50 @ 5 00	Pears	8 @ 10
Cocoanuts, 100	4 00 @ 5 00	Plums	3 @ 4
Cranberries, hbl	12 50 @ 14 00	Pitted	12½ @ 14
Figs, lb.	6 @ 6½	Prunes	8 @ 9
Grapes	75 @ 1 25	Raisins, Cal. bx	1 50 @ 2 25
do, Conechon	2 25 @ 3 00	do, Halves	1 75 @ 2 50
Limes, Mex.	8 00 @ 9 00	do, Quarters	2 00 @ 2 75
do, Cal. per M.	3 00 @ 4 00	Blowers	2 75 @ —
Lemons, Cal. M.	10 00 @ 15 00	Malaga	2 75 @ 3 00
Sicily, box	8 00 @ 9 00	Zante Currants	8 @ 10
Australian, bx	— @ —	VEGETABLES.	
Oranges, M.	25 @ 35 00	Beets, ctl.	50 @ —
Tahiti	— @ —	Beans, String	— @ 5
Cal.	— @ 35 00	Cabbage, 100 lbs	40 @ 50
Pears, box	50 @ 1 00	Carrots, ctl.	35 @ 40
Winter Nells	2 50 @ 3 00	Cauliflower, doz	50 @ —
Pineapples, doz	7 50 @ 8 00	Cucumbers, bx	— @ —
Plum, lbs.	5 @ 6	Egg Plants, box	— @ —
Pineapples, ch't	— @ —	Garlic, New, B.	4 @ 5
St'wherries, ch't	— @ —	Green Peas	— @ 5
DRIED FRUIT.		Lettuce, doz.	10 @ —
Apples, B.	3 @ 5½	Parsnips, lb.	2 @ —
Apricots	15 @ —	Horseradish	8 @ —
Citron	23 @ 24½	Squash, Marrow	— @ 12 50
Dates	9 @ 10	do, bk. tn.	40 @ 50
Figs, Black	4 @ 5	Tomato, 50 lb bx	— @ —
White	6 @ 8	Turnips, ctl.	50 @ —
		White	50 @ —

Gold, Legal Tenders, Exchange, Etc

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, December 24, 3 P. M.

LEGAL TENDERS in S. F., 11 A. M., par. SILVER, 2@2½. GOLD in New York, par. GOLD BARS, \$200/\$10. SILVER BARS, \$22 @ 25 cent. discount.

EXCHANGE on New York, 35, on London bankers, 49½; 49½ Commercial, 50; Paris, five francs @ dollar; Mexican dollars, 82¢@90.

LONDON Consols, 94 7-16; Bonds, 108½. QUICKSILVER in S. F., by the flask, \$1.40 @ 14c.

FRESH attractions are constantly added to Woodward's Gardens, among which is Prof. Gruber's great educator, the Zoographicon. Each department increases daily, and the Pavilion performances are more popular than ever. All new novelties find a place at this wonderful resort. Prices remain as usual.

The celebrated Troy (N. Y.) shirts can be found at Palmer Bros., No. 726 Market street, San Francisco. They keep a full and complete stock, laundered and unlaundered, of men's and boys' sizes of the above make.

ARTESIAN WELLS WANTED.—Parties who are prepared to contract for boring artesian wells are invited to send terms to Edward Frisbie, proprietor of the Reading Ranch, Anderson, Shasta County, Cal.

WHEN A LADY wants a cloak or suit for herself or child and feels in doubt where to buy it, we cheerfully recommend her to go to Sullivan's, No. 120 Kearny street, San Francisco, where she can always find the cheapest and best assortment.

SAN JOSE is decidedly a very popular place of residence on this coast, and James A. Clayton is its leading agent for the sale of city and country real estate. See adv't.

DEAL WITH US KINDLY, ETC.—“We sort of

feel it” in the bones of our pockets, that there are some of our subscribers who can, with a little proper effort, send us their subscription money “about these days.” We therefore modestly ask all who can to present us with the needful, just now, you know.

POPULAR MUSIC.—Make your homes merry and popular with choice music from Gray's Music Store, S. F. We can recommend this large, first-class, standard and popular establishment. Examine his advertisement, appearing from time to time in this paper. Mr. Gray deals in instruments possessing the very highest and most permanent reputation. Call at 105 Kearny Street. The Rural Press can offer to introduce you there.

It is to your advantage, Farmers! to send your orders for all kinds of labor to the old Employment Agency of A. Zeehandelaar (formerly with Labor Exchange) 627 Sacramento street, San Francisco. He selects your men with care and good judgment, with a view to give satisfaction to both employer and employee.

For the best servant girls send to lady Clerk at A. Zeehandelaar's Employment Agency, 627 Sacramento St., San Francisco. In ordering female help it is always customary to advance the fare. Please remit the traveling expenses, for which will be purchased ticket and the girl's receipt taken.

A FLOURING MILL is wanted at Reading, the head of allroad transportation in Shasta County.



My Annual Catalogue of Vegetable and Flower Seeds for 1879, rich in engravings, will be ready in January, and sent FREE, to all who apply. Customers of last season need not write for it. I offer one of the largest collections of Vegetable Seed ever sent out by any seed house in America, a large portion of which were grown on my six Seed Farms. Printed directions for cultivation on each package. All seed warranted to be both fresh and true to name; so far, that should it prove otherwise, I will refund the order gratis. The original introducer of the Hubbard Squash, Plumey's Melon, Marblehead Cabbages, Mexican Corn, and scores of other Vegetables. I invite the patronage of all who are anxious to have their Seed directly from the grower, fresh, true, and of the very best strain.

NEW VEGETABLES A SPECIALTY.

James J. H. Gregory, Marblehead, Mass.

TREES! Trees and Plants,

In large or small lots, both wholesale and retail at lowest rates at the CAPITAL NURSERIES, SACRAMENTO. We have a large and complete assortment not only of all the Deciduous Fruit, Shade and Ornamental Trees, Evergreens, Flowering Plants, Vines, etc., also, a complete assortment of Oranges, Lemons, Limes, Citron, etc., both seedlings and grafted of the best known varieties, ranging in price from 20 cts. to \$1.75 each. Many of our grafted trees now have fruit on them, and most of them may be expected to bear fruit the first and second year from planting. Sample Grounds, U and Sixteenth Sts., Tree Department, J and 7th Streets (near Court House) Branch Yard at Auburn, Cal., also at our New Branch Nursery, known as ORANGE HILL, near Penryn. Send for Catalogue and Price List. Address, CAPITAL NURSERIES, Box 407, Sacramento, Cal., and at Auburn or Penryn, Placer County, Cal. WILLIAMSON & Co., Proprietors.

PIANO Beautiful Concert Grand Pianos, ORGAN cost \$1,600, only \$425. Superb Grand Square Pianos, cost \$1,100, only \$255. Elegant Upright Pianos, cost \$800, only \$155. New Style Upright Pianos, \$112.50. Organs, \$35. Organs, 12 Stops, \$72.50. Church Organs, 16 stops, cost \$390, only \$115. Elegant \$375 Mirror Top Organs, only \$105. Tremendous sacrifice to close out present stock. Immense New Steam Factory soon to be erected. Newspaper with much information about cost of Pianos and Organs, SENT FREE. Please address DANIEL F. BEATTY, Washington, New Jersey.

SEXTON'S NURSERIES, Petaluma, Sonoma County, Cal.



Human Equality.

(Supplemental to "A Man's a Man for a That.")

There is nothing by right divine,
To rule and reign and a' that;
No princely rank, nor lordly line—
Equality, for a' that;
For a' that, and a' that,
Dyastie power, and a' that;
A common birthright crowns us all
With liberty, for a' that.

Let fools and upstarts boast they find
In ancestry, and a' that,
A higher place to them assigned—
Mankind are one, for a' that.
For a' that, and a' that,
A pompous air, and a' that;
It matters not how born or bred,
We're of one blood for a' that.

Though woman never can be man,
By change of sex, and a' that,
To equal rights, 'gainst class or clan,
Her claim is just, for a' that.
For a' that, and a' that,
Her Eden slip, and a' that;
In all that makes a living soul,
She matches man, for a' that.

She asks no favors at his hand,
On bended knee, and a' that;
She is his peer where'er he stands,
In spite of sex and a' that.
For a' that, and a' that,
Fair play for her, and a' that,
In all the grave concerns of life
This is her due for a' that.

In every land, through every age,
How hard her lot, and a' that,
A vassal state her heritage,
Dependent, poor, and a' that.
For a' that, and a' that,
Most deeply wronged, and a' that;
Though subjugated from her birth,
She still aspires, for a' that.

Oh, woe for a man, proud arbiter!
And judgments sore, and a' that;
For Heaven's displeasure they incur
Who crush the weak, and a' that.
For a' that, and a' that,
Injustice vile, and a' that—
All noble souls will women aid
To gain her cause for a' that.

Down with all barriers that prevent
Her culture, growth, and a' that,
Her rightful share in government,
In church and State, and a' that.
For a' that, and a' that,
"Her proper sphere," and a' that;
Whatever right a man may claim,
Belongs to her, for a' that.

Soul is the complement of soul,
And sex of sex, for a' that,
Each is included in the whole,
The whole in each, for a' that.
For a' that, and a' that,
Full liberty and a' that.
For manhood and for womanhood,
By grace of God, for a' that.

Then hail the day, come when it may,
As come it will, for a' that,
When woman's worth, o'er all the earth
Shall honored be, for a' that!
For a' that, and a' that,
Co-equal, free, and a' that;
Through her enfranchisement our race
Shall noble rise, for a' that.

—William Lloyd Garrison.

Children's Rights, No. 3—The Rescue.

(Written for the RURAL PRESS, by Mrs. C. I. H. NICHOLS.)

Before concluding my review of Bro. Berwick's "Children's Rights," a brief mention of his reference to the advocates of woman's rights, with whom I have been publicly identified with for thirty of the best years of my life, seems called for.

Bro. Berwick says, "I have long been accustomed to consider 'duties' and 'rights' as inseparable; to consider the diligent fulfillment of the one to constitute the most valid base for a claim to the other. Perhaps I am wrong in my idea that many women who have been most enthusiastic in demanding their rights have been far less ardent in the discharge of their duties. Parental and domestic duties are treated as quite secondary considerations of life, and sometimes get sneered at as things that must be cleared from the track of the coming woman. I dare affirm that any woman who sneers at such qualities in her sisters, has no rights any longer, as a woman, worthy of discussion."

To the personal implications in the above, founded as they are in misapprehension of the social standing and objects of the persons referred to, I offer no rebuttal. I remember how, from newspaper jeers, 30 years ago I distrusted my "sisters," not knowing that in our separate localities we were working to the same end, and I have faith that, Bro. Berwick, like many a good man I have encountered, will yet be found championing the cause of equality before the law.

"Parental and domestic duties to be cleared from the track of the coming woman," Bro. Berwick? Alack, for the women already on the track! Their complaint is, that they find the track cleared of the means and conditions essential to the proper performance of parental

and domestic duties. At every way-station they find spendthrifts, gamblers, drunkards, "jail-birds," in control of the "rolling-stock," and, legally empowered by better men, confiscating to their base appetites the earnings of toiling wives, who, by reason of this sequestration of their inalienable and inherent rights, can neither feed their "crying little ones," nor make a home, that "sine qua non," as Bro. Berwick truly says, "of having children at all."

The laws and amendments of laws in behalf of the higher interests of humanity, enacted within the last 30 years by representative men, in response to the prayers and popular sentiment evoked by the advocacy of equal rights by women, vindicate the justice and the womanliness of our movement.

Woman's Right to Be and to Do

All that God has endowed her for; the possession of a faculty being voucher for both the right and the obligation to put it to legitimate use, is the "slogan" that has opened to suffering women a thousand avenues to grateful employment, opened to thinking women facilities for widening and deepening, in the listless and benumbed souls of thousands of women and men, a feeling of responsibility for domestic and social evils within the reach of public sentiment and just laws.

It may be a little awkward for Bro. Berwick, but I trust it will aid him in a reconsideration of his position, to know that in washing his hands of us, he has planted himself squarely on the main plank of our platform, viz:

"Duties and Rights Are Inseparable."

But to require first that "diligent fulfillment of the duties, which Bro. Berwick says, "constitutes the most valid base for a claim to the rights," is making rights mere contingents of duties, and utterly discards the doctrine of the fathers, that rights are inherent and inalienable. It puts rights on a merchantable basis, and treats them as premiums on achievements under difficulties. It is, indeed, requiring accomplished results, irrespective of means essential to such accomplishment, like the Egyptian demand upon the Hebrews: "There shall no straw be given you, yet shall ye deliver the tale of bricks."

Laws punishing infanticide, recognize the right of the child to life precedent to the fulfillment of duties. And all laws directly or indirectly protecting to the individual, liberty, property and self-government, or the pursuit of happiness, are based on this idea of inherent rights as co-existent with, and necessary to life and its inherent possibilities of normal development, not as rewards for the fulfillment of duties, which, indeed, brings its own rewards in enlarged ability to perform, and increased capacity to enjoy.

Rights cover the conditions of dutiful service in all human relations, and are the exact measures of responsibilities. If I have not by the relation of maternity, a natural right to my child and my child a right to me, as against all the world, why am I held more responsible than all the world—the father included—for its proper tending and training? With every duty imposed by a natural relation, is coupled the right to perform it. And that right of personal freedom to perform the duty, covers every means and condition essential to its performance, even to the deciding of what those means and conditions shall or ought to be. For to deny the conditions or divert from one's control the means for the performance of a duty, embarrasses or prevents its discharge; and what is more, perhaps, to be regretted in its demoralizing effect upon character, it lessens the feeling of responsibility on which the vigilant and successful performance of duty so much depends.

Happily in his championship of children's rights, Bro. B. not only puts his logical foot forward, but sets it down on bedrock. He says, "To this right (protection) children are doubly entitled from their superior needs. Children's wants should claim and obtain priority to parents' wants."

From premise to conclusion this is woman's rights doctrine. And in declaring the claim of the child to priority of consideration from both parents, as against their own and each others' lesser needs, Bro. B. virtually concedes not only the obligation, but the right of each parent, independent of the will of the other, to provide for the wants of the child. The question then arises—How shall a fatal conflict of feeling and action be averted when there occurs a difference in regard to the child's needs, and the means and modes of meeting them? The needs of the child and the ability of the parties severally considered, to meet its needs, should decide. Their regard for each other, and above all, their compassionate love for the child, will make it easy to "back down"—as Bro. B. says—in the interest of the child.

As the initial man or woman, the child concentrates within itself all human needs; and this sum of human needs is, in its tiny hand, an unimpeachable declaration of human rights. Its helplessness to minister to its own wants is the measure of its claim on others' help. So the natural or superior endowment of either parent to meet its needs, is the measure of the parent's obligation to do so. But in a difference as to the comparative rights and responsibilities of the maternal and paternal relations—inaternity, in virtue of special and exclusive endowment for the guardianship and succor of the pre-natal and post-natal child-life, takes precedence of right as also responsibility in the dual protectorate established over the child by marriage. Where no such protectorate exists; as in the case of illegitimate children, the supremacy of the maternal relation is unquestioned.

The logic of science coincides with this conclusion. In evolution the ascending scale is marked by added organs and functions. The added functions and organism of maternity with her greater delicacy of temperament and correspondingly quick and appreciative sympathies—mark woman's relations to human life as more intimate and imperative than man's. It also indicates her need, and justifies her claim to self-governing rights. For inasmuch as it involves her in duties, responsibilities and needs, which by reason of his non-endowment for maternal offices, man can never appreciate, except approximately and superficially—he can never be so competent as woman to comprehend the needs and dictate the conditions, essential to herself and child in their pre-natal and earlier post-natal relations. When in the natural course of development, the needs of the child are no longer a special tax upon the special qualifications of the mother, the equality of parental rights and responsibilities obtains, and the blessing of a "loving father" is scarcely less than that of a "loving mother."

"Natural laws," Bro. B. says, "are the laws of God." To maintain then, that human relations, as established by natural laws, are in conflict with each other, or can be, without injustice and disaster—sacrificed one to another—is to maintain the absurdity of a God in conflict with his own laws, and at war with relations which himself has established. When that "line of beauty," so graphically and beautifully drawn in a late editorial, becomes a reality,

Justice to Women

will beautify it from base to arch.

My friend Berwick switched himself off the wrong track so gracefully, and withal so heartily and with such a reassuring suggestion of recruits for the campaign, that I seized my pen on completion of the last paragraph of the above, to collect the "law and the practice" of California, which he called for. But as I was taken ill before the completion of my task and am still unable to use my pen, I will not delay the acknowledgment of his manly frankness and appreciation of my efforts. A great many good men are ignorant in those matters, or there would long since have been a sweeping reform.

Notes on Spelling.

EDITORS PRESS:—Will not the following paragraphs from the scholarly and careful old *Atlantic Monthly* be acceptable to many readers as an item of literary news?—J. R.

"During the last summer the spelling reform made evident progress and it has now reached a stage where the public can co-operate with more definiteness than has heretofore been possible. The reform was started by the American Philological Association, and that body at its meeting held at Saratoga in July, recommended the immediate adoption of the following new forms, which, it should be said, are in the same line with the changes which have given us frolic and music for the frolicke and musick of our fathers. The new spellings are: Tho, thru, catalog, wisht, gard, hav, infinit, definit, liv, giv, ar.

"The Spelling Reform Association met with the American Institute of Instruction at the White Mountains, and adopted the following rules for immediate observance:

- "I. Use *e* for *ea* when equivalent to short *e*; as helth, welth.
- "II. Omit silent *e* after a short vowel; as hav, giv, liv.
- "III. Use *f* for *ph*; as filosofer, fantom.
- "IV. Omit one letter of a final double; as wil, shal.
- "V. Use *t* instead of *ed* when it represents the sound; as wisht, slash.

"These simple suggestions are not difficult of adoption, and there is reason to believe that they will come into immediate use in the public journals."

WOMAN'S SPHERE.—A writer for the *Cultivator* says: Farming is a much more dignified and independent business than any other. If necessary the daughters can learn the scientific part and the sons the practical; or, if woman's rights are to prevail, I have no objection to women taking to the plow and hoe and becoming the commanders-in-chief of farmers. But I have digressed from the main question. I will go a little further and say that I think they can exert a much greater influence by remaining commanders-in-chief of the household. Good cooking is much more important to families and communities than good doctoring, and quite as difficult to learn thoroughly. Good housekeeping contains as many eloquent sermons as good preaching, and exercises a much wider influence, because there is a great deal more of it. The husbands, brothers and lovers will always try to be good if properly trained, fed and managed by the wives, sisters and sweethearts.

FRIDAY AFTERNOON IN SCHOOL.—Superintendent Harrington, of Bridgeport, Conn., makes a good suggestion in advising teachers to encourage their pupils in thoroughly good reading. "If teachers," he says, "would devote a part of each Friday afternoon to an exercise in which the pupils should give a short account of what they have been reading during the week, it would help implant a love for a better class of literature. Of course, this implies thought and care on the part of the teacher, since no teacher can implant a love for good reading unless he enjoys it himself."

Have Faith in Your Business.

The last few years have been discouraging not only to farmers but to all classes of business men; but the idea so often put forth by agricultural writers, that the business of farming is above all other pursuits in a bad way, is a fallacious one. As a rule farmers have not made money rapidly—many of them have been losing—but as a class they have had no greater reason to complain of their business than manufacturers or merchants. In brisk times, when prices are advancing, manufacturers and traders make money more rapidly than farmers; and in dull times when values are constantly shrinking they lose money more rapidly. They have to take greater risks.

The truth is, that farming is on the whole, the safest and in the long run as profitable as any other branch of industry. A large proportion of farmers succeed, while comparatively few merchants and manufacturers are successful.

Farming now brings light returns. But what business is offering better inducements? Where can capital and labor be employed with better prospects of success? As compared with other industries farming is not in such a bad way after all, and we believe that there is a bright and prosperous future arising before the farmers of America. They are to feed the world. They have the rich soil, the earnest industry, the remarkable enterprise, and if they lack any one thing more than another it is faith in their business and confidence in themselves. —Husbandman.

BENEFIT OF LAUGHING.—Dr. Greene, in his "Problem of Health," says there is not the remotest corner or little inlet of the minute blood-vessels of the human body that does not feel some wavelet from the convulsion occasioned by good, hearty laughter. The life principle, or the central man, is shaken to its innermost depths, sending new tides of life and strength to the surface, thus materially tending to insure good health to the persons who indulge therein. The blood moves more rapidly, and conveys a different impression to all the organs of the body, as it visits them on that particular mystic journey when the man is laughing, from what it does at other times. For this reason every good, hearty laugh in which a person indulges tends to lengthen his life, conveying, as it does, new and distinct stimulus to the vital forces. Doubtless the time will come when physicians, conceding more importance than they now do to the influence of the mind upon the vital forces of the body, will make their prescription more with reference to the mind, and less to drugs for the body; and will, in so doing, find the best and most effective method of producing the required effects upon the patient.

MYSTERY OF PERFUME.—No one has yet been able to analyze or demonstrate the essential action of perfume. Gas can be weighed but not perfume. The smallest known creatures—the very monads of life—can be caught by a microscope lens and made to deliver up the secrets of their organization, but what it is that emanates from the pouch of the musk deer that fills a wide space for years with its penetrating odor—an odor that an illimitable number of extraneous substances can carry on without diminishing its size and weight—and what it is that the warm summer brings to us from the flowers, no man has yet been able to determine. So fine, so subtle, so imponderable, it has eluded both our delicate weights and measures and our strongest senses. If we come to the essence of each odor we should have made an enormous stride forward, both in hygiene and chemistry, and none would profit more than the medical profession if it could be as conclusively demonstrated that such an odor proceeded from such and such a cause, as we already know of sulphur, sulphurate, hydrogen, ammonia and the like.

IRIDESCENT GLASS.—Ornamental glassware in many styles, tinted with the glowing colors of the rainbow, is now making its appearance in the shop windows of Broadway and Fifth avenue. This is one of those brilliant little achievements of science that delights the eye and pleases the imagination. To produce the colors, the glass, while in a heated state, is subjected to the vapor of chloride of tin. Shades of more or less depth or intensity are imparted by adding to the tin chloride a little nitrate of strontium or barium.

A CENSUS OF THE RELIGIONS.—A German collector of statistics estimates the population of the earth at 1,340,145,000 souls, of which about 413,000,000 are Christians, and 900,000,000 non-Christians. Catholics number 210,000,000 and Protestants 115,000,000. Of the Greek church there are 80,000,000, and of other Christians 8,000,000. Jews are reckoned at 7,000,000, Mohometans at 120,000,000, and "the Heathen" of all kinds at 770,000,000.

ANOTHER "LARGEST" TELESCOPE.—Now that Professor Watson has become a permanent fixture of the University of Michigan, and will remain director of the observatory, he has been guaranteed by the citizens of Detroit \$60,000 for the purchase of the largest and most powerful telescope in the world, to be located at the observatory at Ann Arbor, Michigan.

Chaff.

A LABORER, while breaking stones on the roadside, having a shade over one eye as a guard, was thus accosted by a companion: "I say, Tummy, hast 'ee lost an eye?" "Why," replied the other, "hast 'ee found one?"

OLD LADY—to tourist who is growling over his "corns": "An' doye no try anything for them?" "Tourist: "Oh, yes, I've tried lots o' things!" Old lady: "Ye shall gang to some o' the cornpeans; maybe they could cure them for ye."

ELDER SISTER: "Don't go out in the garden Gussie." Gussie: "Why not, Cis, it's a foine mornin'." Elder Sister: "How can you tell such naughty stories? It's been wet ever since I got up." Gussie: "Sure, Cis, dear, it's a foine wet mornin', I mane."—*Judy*.

A PERSON who was recently called into court for the purpose of proving the correctness of a surgeon's bill, was asked by the lawyer, whether "the doctor did not make several visits after the patient was out of danger?" "No," replied the witness, "I considered the patient in danger as long as the doctor continued his visits."

THE proverbial wit of the Irish jarvey is oftentimes mixed with an undercurrent of stern reality that is as touching as it is eloquent. Driving through Sackville-st., Dublin, the other day on an outside car, the wretched appearance of the horse suddenly struck me. I said: "Pat, you ought to be taken up for cruelty to animals, driving such an old screw as that." "Be gor, sur," was the quick reply, "if I didn't dhrove that, I'd be taken up for cruelty to a wife and six children."—*London World*.

"ARE you the saleswoman of whom I bought this handkerchief yesterday?" asked the purchaser at one of our dry goods stores. "I am the saleslady who served you, madam," responded the reduced Empress in banged hair, long watch chain and ringed fingers, who presided at the counter. "Well," said the customer, "I will take a dozen more, and as I wish get them to my washerlady at once I will get you to send them to my carriage around the corner. My coach-gentleman cannot get to the door just now, for the cart of the ash-gentleman."

ONLY A WORD.—Who can picture the possible power of a single word for good or evil? There was on one of the streets of a certain city a family of two young married people, handsome, loving, rich and happy. The whole current of these people's existence has been changed by a single word. The other evening the wife addressed her husband a question, and he—she noticed he was dreamy and abstracted—replied, absently:—"What, Kate?" Her name is Susan. For this single word the husband sleeps on the sofa, and has a big slip of sticking plaster down the back of his head; the wife has had to buy a new broom, though she only had the last one two days; her eyes are red with crying, and she threatens to arise and go unto her father, and whenever she speaks of a handsome widow who lives round the corner, and was christened Catherine, she speaks of her disdainfully as "that thing."

MRS. MOLLOY AND HER TEMPERANCE WORK IN ENGLAND.—Mrs. Emma Molloy, of Indiana, gave an address at the anniversary of the United Kingdom of Alliance of Great Britain on Tuesday evening, Nov. 26th. The exercises were held in Memorial Hall, Farrington street, London, and were presided over by Alderman Sir Andrew Lusk, M. P., and among the speakers were Benjamin Whitworth, Esq., and A. Sullivan, Esq., both members of Parliament. Mrs. Molloy is the first lady who has ever been invited to speak before the Alliance. Canon Wilberforce has extended her an invitation to deliver an address at Southampton, and she has engagements in London, Leeds, Sheffield and other places in England, which will occupy every evening up to April 1st. She will speak in Preston the present month, which is the birthplace of total abstinence in England, and the home of the renowned Joseph Linsey, who took the pledge of Dicky Turner, who gave teetotalism its name. Many ladies of rank are interested in the temperance movement in England, and one of the plans adopted for its promotion is the holding of what is termed drawing-room meetings, and by this means many ladies of high social culture have united in the work.

JUST SO.—A man in Fulton, N. Y., recently laid his finger on the table in front of a buzz saw to feel the momentum of the air. The saw was going so fast that the teeth were not to be seen. His finger was taken off. While he was looking at it the foreman came up with the question: "How did you do it?" "Why, I put my finger down so," answered he, placing the other forefinger, as he thought, well away from the teeth. To his horror, the saw took off that one, too, at the second joint.

THE LUMINOUS CLOCK-DIAL.—The inventor of the luminous clock-dials, of which so much has been itemized in the newspapers, appears to be W. H. Balmain, and his secret consists in mixing a phosphorescent salt with paints and varnishes, which will store up light during daylight, and give it out at night. He uses a mixture of lime and sulphur.



Young Folks' Column.

A Car-Horse's Soliloquy.

[Written for the RURAL PRESS by RAY.]

There is as much diversity in the spirits of horses as in the minds of men.

You see, when an equine trots baek and forth over the same road year in and year out, knowing every curve in the track and every tree by its side, there is naturally a good chance for moralizing, especially if the horse is constitutionally contemplative—a faculty, by the way, but little appreciated, as we find to our sorrow.

The ambitions of my colthood received no shadow of encouragement, inasmuch as I possessed not a pleasing form, a characteristic that is absolutely necessary to the success of horses and women. It was with many blows and much loss of skin that I learned what small things we should be thankful for, and it was with a humbled and contrite spirit that I entered the harness and became as a leader in the street car.

I am ashamed to confess that, after all the humiliation I had endured, the sudden power granted to me as a leader was too great—much too great, and I became insufferably vain as a consequence; failing to receive the homage due me and the importance of my office, I was for several days most miserable; but, concluding finally that we deserve no great credit for doing what we are obliged to do, and we deserve credit only for the manner of the doing, I settled the vexed question, and returned to hay and happiness.

I used to know a blooded horse, that would no more have neighed to me than to a chipmunk. He was killed by over-care and over-feeding. His master lost several thousands of dollars by the lazy quadruped, and yet mourned as though the beast had done years and years of honest toil.

Why, if I were to die, they would give my flesh to the fowls of the air, and the beasts of the field, or rather manure for the cornfield; but, pshaw! in a dozen years the worms will have eaten us both and then where's the difference in station?

I hate to see a horse of infinite promise come to nothing, as one I knew who was "too high-spirited for his own good," so much so that he is now dragging rocks from the quarry, harnessed with a dozen mules. Of course it is "all his own fault," but that is mournful consolation sometimes.

If I am not wearying you, I would like just here to clear up a mystery that has been hanging over my life. You see I was accused of kicking a man to death once, a thing I didn't do. He was a kind husband I have heard and a good driver I know. He used to lean over the dashboard and strike me with his hand instead of the whip, showing at once how tender he was of a skiny old beast like me. Ah me, well he lost his balance and the car passed over him. I heard the people say it was heart-rending to see his poor wife and five helpless babies sobbing over him and caressing his mangled remains. And the other men swore at me and said I did it, but I didn't; indeed, indeed, I didn't, and he will tell them so when they meet him in the land of departed souls. Alas, I have no soul, and for me there are a few more rough roads and hard blows, a little more scant fare and weariness and stiff old bones, and this poor old carcass will stretch itself prone on the sod and rise no more forever; and there will be no foolish fond little children to weep over me as poor old Dobbin had, nor wealthy man to mourn as "Moorish King" was mourned, but I think that so far as I knew I have done my duty and perhaps that is all we can do any way.

I think I cannot work to-morrow, my bones are stiffening, stiffening, and I am cold, cold, cold. Ah! old horse, you have gone your last trip, you have stopped for the last passenger, you have reached the station, the final station that old and young, horses and men, beggar and king, stops at finally, death.

"Here boys, old Jake is as dead as a door nail, drag him over into Jones' lot, they are going to plant corn there this season!"

L'ENFANT TERRIBLE. (Master Charley and his family are spending a few days at the house of that promising artist, Mrs. Van Dyke Browne). Mrs. V. B.—Well, Charley boy, why are you looking so hard at that picture? Charley—Why, mamma says that every time she looks at this picture it makes her sick, and I thought I'd see if it would me.—*Harvard Lampoon*.

GOOD HEALTH.

The Art of Prolonging Life.

Persons living in marshy districts, says the Baltimore *Underwriter*, who are necessarily exposed to miasmatic exhalations, will find that lime juice mixed with water and taken freely as a beverage, will prove an excellent preventive of malarial fevers. Those who are suffering from intermittents will find that the antiperiodics, which are cheaper than quinine, the great type of the class, will answer as good purpose if taken in the only proper way, that is a full or even heroic dose one hour before the expected recurrence of the chill. When distributed throughout the intermission in very small doses their effect is lost, and disappointment follows.

The medical gentlemen who so carefully prepared the tabulated reports of the mortality experience of the Mutual Life, of New York, have shown in their admirable analysis of the causes of death, that the proportion of loss from consumption has been 19.17% of the total mortality of the company, and 19 per 10,000 annually. Such figures show the immense importance of more effective methods of treatment, and we are glad to observe in the *Medical Record* the details of a treatment that, so far, has been very promising in its results.

The theory of cure is to clear the lungs by a mechanical effort, chiefly by manipulating the muscles of the throat so as to cause more forcible breathing; second, to establish perfect digestion; third, to promote a process of healing the tubercles, so that they shall become chalky or calcified masses; fourth, to compel the patients to take plenty of fresh air, sunlight, and out-door exercise. To secure perfect digestion, a special diet is ordered in each case, and the food is changed as the power of assimilating it improves.

To promote the calcifying of the tubercles, the salts of lime, which are found in most vegetable and animal food, must be supplied in a soluble condition; the theory is that too much heat in ordinary cooking destroys the natural combination of these salts with albumen, and renders them insoluble to a weak digestion. Out-door exercise is regarded as important that the patients are instructed to go out in rain, snow, dampness, or even night air or dew, the habit thus acquired neutralizing the danger of catching cold from such exposure. Only strong head winds and extreme hot weather need be guarded against. The patients sleep with the windows open, summer and winter.

A Minneapolis physician, whose sinchona recipe for the cure of drunkards recently attracted attention, recommends this highly carbonaceous mixture in the treatment of consumption: One half pound finely cut up beef-steak (fresh); one drachm pulverized charcoal; four ounces pulverized sugar; four ounces rye whiskey; one pint boiling water. Mix altogether, let it stand in a cool place over night, and give from one to two teaspoonfuls, liquid and meat, before each meal. The value of this method of supplying a sufficiency of carbon in a form that may be readily appropriated is obvious.

SANITARY SCIENCE.—At a recent meeting of the N. Y. Academy of Sciences, an interesting discussion was held on Sanitary Science, in which Dr. Minor attributed disease to what Richardson calls "ultra-microscopic molecular aggregates," which always exist in the air, but take hold of us only when our vitality is reduced to a certain point. It has been shown that decay is absolutely impossible in vessels from which they are excluded. But for them the earth would now be heaped with the undecomposed remains of animals and vegetables. According to this view, the future efforts of sanitary science must be simply in the direction of learning how to protect ourselves against the "ultra-microscopic molecular aggregates." Much can be said in regard to the unhealthy conditions arising from the use of illuminating gas, which not only withdraws from our rooms a large amount of oxygen, but also fills them with noxious products of combustion. Considerable gratification was manifested at the probable avoidance of much of this trouble from the expected introduction of the electric light.

FOOD TOO EASILY DIGESTED.—The healthy adult requires food which will give the stomach work to do. The stomach requires work as much as the legs or arms. The nutriment of food for such should not be abstracted and ready prepared, as, for instance, it is, in milk, eggs, meat; it is better that the stomach abstract it by the process of digestion from food. With the sick and the young, however, the case is very different. The stomach of a strong man is like a quartz crushing machine, capable of doing vigorous work. That of a dyspeptic is quite different, and may need great care to enable it to do its work at all. Weak stomachs, however, may be trained by slow degrees to do their work well by giving them just the right food, properly chewed, and stopping the expenditure of nerve force in other directions so that the blood may go to it. By such a course half the dyspepsia might be avoided or cured.—*Herald of Health*.

DOMESTIC ECONOMY.

Extra Fine Mince Pies.

Mrs. Beecher gives in the *Christian Union* the following directions for making mince pies, which may help some of our readers in the holiday manufacture:

Get four good sized beef tongues fresh from the butcher's, soak an hour in cold water, then rub in salt and put into boiling water. Let them boil till quite tender. Take them up and remove the skin. When cold chop very fine. Chop two pounds of best, sweet kidney suet very fine, and while chopping be careful and free it from any skin or stringy bits. While the tongues are boiling—and cooling—let all else that is needed be prepared ready for use as follows:

Take five quarts of cider, right from the mill if possible. Put it into a porcelain-lined kettle that has no crack or flaw in the lining; if not, a thoroughly scoured and clean brass kettle or new tin kettle. Boil the cider down to two quarts. Or if you cannot get sweet cider take two quarts of currant or grape juice (if the pies are made after fruit season)—one quart of good syrup (maple syrup is best) and if you have any syrup left over from spiced sweet pickles and an equal proportion of that boil all down at least one-half, or till ropy. Just before it has boiled enough put in two ounces or four tablespoonfuls of butter.

While the syrup is boiling seed and cut in two as you seed four pounds of fine, fresh-looking raisins. Pick over, wash and dry three pounds of currants, or, what we much prefer, sultana or stoneless raisins. Slice very thin and cut in half inch pieces a pound of citron, half a pound of candid orange peel, four quarts of the best tart apples chopped very fine, to be measured after chopping. Put this fruit into a large wooden or earthen bowl; add three tablespoonfuls of cinnamon, one of cloves, one of ginger, four grated nutmegs if liked, the grated rind of two lemons, one tablespoonful of salt, one teaspoonful of allspice, and three pounds of sugar, and stir all together. When the meat and suet are chopped put them in with the fruit, and with the hands work all together very thoroughly. Add the juice of two lemons and four oranges (strained), and mix with this compound, then stir in the boiled syrup. If there is too much, so that the meat will be too juicy, bottle it for future use. Mix the meat, seasoning and syrup well together, and put all together in a perfectly clean porcelain or brass kettle and let it all boil for twenty minutes. Before taking off from the stove taste and see if more seasoning is needed, and add to suit your own taste.

No brandy or wine can make a better quality of mince for pies than this. It will keep for months. Pack it in stone jars and keep in a cool place. When perfectly cold pour molasses over the top so as to thoroughly cover it and cover tightly.

When needed for pies take out what is needed for one baking, put a few whole raisins into each pie, and bits of butter over the top. Taste and learn if after standing so long, any more seasoning is needed. If not moist enough, for by long standing the meat and fruit will have absorbed a large amount of the liquid, and add some of the syrup that was bottled, and put aside. It is well always to prepare more syrup than seems needed at first.

Beef tongues are the best for mince pies, but the neck piece will make good pies, and is cheaper, or seems so, but if one deducts the bones, gristle and stringy parts it will be seen that the best is usually the most economical in the end.

Save all syrups from canned fruit, and if a small portion of preserves or jelly of any kind is left over it can be used for mince pies to their improvement, and is an economical way of using remnants that are too small for the table. When the mince is first made, if all the remnants left in jars of sweet pickles, preserves or jellies, are gathered together and put into this compound it is a saving, because it will take the place of part of the raisins, candied rinds, etc.

The lean meat left from steak of a roast, chopped fine and freed of all gristle, and stringy parts, answers very well for mince pies; and we should prefer to use all cold meats for breakfast hashes, and buy fresh meat for pies. There is nothing saved by using such scraps, but the pies lose a good deal.

Beef's heart well boiled, will make an excellent mince for pies, and is not as expensive as beef's tongue.

FRENCH HONEY.—Break one pound of lump sugar into pieces, put it into a pan, and add the yolks of six eggs, and the whites of four, the juice of four lemons, and the grated rind of two, and three ounces of butter. Stir this mixture over a slow fire, until it becomes thick like honey. It will keep a year, put into a dry, cool place. This is nice for a variety of tarts or shells.

BAKED CUSTARDS.—One pint of cream; four eggs; cinnamon; almond-flavor, and three ounces of sugar. Boil the cream with a piece of cinnamon; pour it into a basin, and when cold, add the eggs, well beaten and strained, the sugar-powered, and a few drops of almond-flavor. Bake in small cups, in a cool oven.



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NEW ADVERTISEMENTS.

Trees and Plants, Williamson & Co., Sacramento, Cal.; The Randall Pulverizing Harrow, Griffith & Burke, Sole Agents, Yolo, Cal.; Seed Catalogue for 1879, D. M. Ferry & Co., Detroit, Mich.; 4,000 Well-Rooted Grape Cuttings For Sale, French Bros., Florin, Cal.; Burbank Seedling, Luther Burbank, Nurseryman, Santa Rosa; Pianos, Organs, Etc., Kohler & Chase, S. F.; Sexton's Nurseries, Petaluma, Cal., Wm. Sexton, Prop'r.

The Week.

A happy New Year to you all, kind readers! We are prone to render you especially happy at the outset by omitting the usual editorial preachment on the behavior fitting the opening of a new year. We take it for granted that you will not step over the borders of a new, unstained year without freeing your feet from the dust of evil habits, evil associations and evil thoughts. We take it for granted that each reader will fill his heart with the strength of better purposes and cluster about him a cohort of bright vows and resolutions which, even though early broken, may still leave some rays of light to partially illumine the pathway of the year. We have not, all of us, enough will and strength to maintain a flaming bonfire of noble purposes to guide our steps, but it is wise to start the blaze in the hope that though the wind of temptation may drive our fuel before it, there may still be scattered brands which will enable us to hold to the right direction though the progress be slow.

The year just closing has recorded a good mark of advancement for California agriculture. Many new homes have been founded and many made more sure by the results of honest and intelligent labor. The outlook for the new year is favorable to a great increase in these signs of substantial progress. We are advancing by the aid of careful investigation and wide experience with the novel conditions which our soil, air and sky furnish us. The lover of California cannot but be gratified with her splendid progress as a commonwealth, and now let each individual worker borrow from the general fund some new incentive to renewed exertion. Then we shall have a busy, a successful and a happy New Year throughout all our borders.

A Libel on California Honey.

One of our readers in Ventura county calls our attention to the fact that a London firm has issued a circular of prices, etc., which contains this gross insult to California apiarians: "California honey is arriving in the London market and is apparently adulterated with glucose." This is so base a libel that it is hard to speak of it in terms of patience. It is so utterly untrue, and prompted either by such dense ignorance or such malignant malice that it awakens the deepest indignation. And yet its perfection of falsehood, will, we doubt not, be the death blow to the slur which it seems is intended to be cast upon the peerless product of our apiaries.

The world at large knows very little of our vast honey resources and of the character of the men engaged in developing them. They know nothing of the spirit of the producer and nothing of the wonderful results which follow his efforts in the rapid and immense storage of pure honey by the bees. They do not know that our bee pasturage is so rich, and of such high quality, that nectar worthy the sip of a goddess can be produced at a less price than the chemist can fabricate his insipid glucose, and that even if he were evilly disposed, as are his revilers, the California honey producer could not produce the vile adulteration so cheaply, as by the aid of the bees he can gather the fragrant gift of the blossoms. This fact alone would probably be answer enough to the charge of adulteration on the part of California apiarians, but there are other facts which court statement in this connection.

The energetic beekeeper of southern California explores deep canyons, and high, rough and steep mountains, in many cases almost impassable for wild animals. He searches out springs and water courses, and in many cases, at great expense, conveys water to a point where a place can be obtained large enough to locate his cabins and apiary. Then he works a road to the valley as an outlet for his tons of honey. The next thing we hear of him is that he has 10, 20 or 50 tons of honey, put up in fine new bright tin cans, and these enclosed in clean and white cases ready for the market. Through the influence of friends and business men in San Francisco, he is enabled to obtain some advances to keep off creditors and keep the wolf from his door. There being no market at home he seeks one abroad. In London, the greatest market of the world, he seeks to find an outlet for his productions. He is conscious of no guilt or crime on his part, and the only sin he can possibly be charged with is that he produced tons of pure, white, clean honey, put up in so much better style than Chilean, Cuban and other honeys generally put up for the London and other great markets of the world, that there is fear and jealousy lest this new candidate for public favor may supersede the old dirty barrels filled with a dark sticky mass of stuff that a California beekeeper would never think of calling honey. These dirty, loaky old packages, with the brown stuff oozing from every crack, are in danger of being superseded by the clean, white cases, lined with bright tin and filled with pure, nice, clean honey, taken from virgin combs without heat or pressure. There are no dead bees, no crushed brood, no pollen or bee bread, but the clean, pure honey, as it was taken from the flowers by the bees, each kind being taken and kept separate from the other, and correct samples of each kind produced during the honey season, enables the buyer to select the color and flavor best suited to his taste or trade.

With this statement of the case it is perhaps not difficult to divine the spirit which prompted the attack upon California honey to which we have alluded. It seems likely that these bright California cases have rubbed too hard against the grimy barrels from the West Indies, and been smirched by them. In other words, the merchants who have the handling of these sticky barrels find their occupation endangered by the excellence of the cases from California, and, like the old shrine seller of Ephesus, they are endeavoring to raise an uproar against the excellence which assaults their inferiority. It is not in the nature of things that such evil arts will long succeed, but they should be driven back into darkness at once by the general publication of the truth. Our honey producers have great hopes of the London market, and these hopes are based upon

supplying a better and purer article of honey than has ever been known in their trade. It will be as honest and excellent a product as brain and brawn, bees and blossoms can make it, and to make assertions that this product is "apparently adulterated" is an insult which must be flung back upon the evil and designing men who made it.

The Old and the New.

Again we come to the close of a volume of our journal, and again an index affords material for a review of the last half year's work. It seems to us as we scan the closely-printed columns of the index, that the RURAL PRESS has been richer than ever before in topics of real and lasting value to agricultural readers. There is hardly any line of our progress in agricultural growth which has not shown in our columns the facts and phases of its advancement. Never before have our readers taken so general an interest in keeping us informed of their successes and their failures, and thus there have been focused in the PRESS a flood of light and a fund of practical lessons, which have cheered and aided all workers in our diversified cultures. This fact is one which we frequently mention, and it is one which seems to us so valuable in our journal that we cannot drive it from our mind. What can a single mind do unaided in promotion of an industry which busies tens of thousands of brains? Very little, indeed. But when the editor has at his hand the fruits of a thousand experiences, he becomes indeed a power for good in the line he is working. The lenses of the camera collect and condense the rays from mountain top and valley depth, from cloud expanse and plain extent, and on the plate the landscape glows in mirrored beauty. Thus our journal, taking light from you, kind readers, whether you dwell high up on the Sierras, along the valley streams, or upon the bluffs of the coast line; whether you are north as the edge of British domain, or south to the line where the sunny garden of the south counties shades off into the barren expanse of the Mexican peninsula—you all are ours and we are yours in the effort for building up the agricultural interest of our favored land.

We trust to go forward into the new year with ranks of subscribers unbroken but largely recruited. Let it be understood that no journal in the world serves California agriculture so practically and devotedly as the PACIFIC RURAL PRESS. None has such material to work with and none can claim a higher zeal and purpose to use it well. Let us go forward in this work. You sustain us by your cheerful subscriptions and serve the whole coast with your unbroken flow of thoughts, suggestions and experiences. Let both be unrestrained. Enlist your neighbors in the support of our journal. Tell them that if the RURAL PRESS fails to reach a useful fact, or lends support to anything but a straight truth in life or life's work, it is a fault of intelligence, not of purpose. Tell them the value you have derived from our work. We rest our enterprise upon the popular judgment. If we forfeit a good verdict there, let us fall.

For the coming volume we can only say that in every line of our work there will be a constant effort to go forward. More work will be done on the paper than ever before, and the results will, we trust, duly appear in improvement of it. Those most directly engaged in building up the RURAL PRESS regard it as the work of their lives, and its highest success will satisfy their ambition. They invite all the friends of the journal to co-operate with them for the public good, toward which, every good citizen of our State is bending his endeavors.

FRUIT TREES.—We call attention to the advertisement of Fisher, Richardson & Co., of Los Angeles, in this issue. This firm is one of the leading ones in the famous propagating region where its business is located. They announce their future work to be in semi-tropical fruits alone, and offer to close out their "temperate" trees. This may be worth the attention of general fruit growers at the south. The orange and lemon trade of the firm extends well over the State.

ON FILE.—"Her Rose Garden," C. H. S.; "The Doctor's Talk with Mothers," X.; "Selling Climate, etc.," M. P. O.; "Enterprise Grange," G. R.; "Finding the Corners," K.; "Potted Plants," W. C. L. D.; Tree Peddlers, G. H.; "Pacific Coast Conifers," J. G. L.; "Progress in Fruit Growing," H. W. H.; "California," G. W. J.; "Individuality," Cordelia.

QUERIES AND REPLIES.

Chufas in Alameda County.

EDITORS PRESS:—I send you by mail a sample of grass-nuts or ground almonds, as they are called. While in Los Angeles last winter I secured enough of the tubers to plant a drill about eight feet long. I planted them late in June and was surprised to see how soon and vigorously they came up and grew, planted as they were in dry sandy soil. They tell me that they are excellent hog feed. Why would they not be a good crop to raise on the dry sandy San Joaquin plains, as once planted the ground would be always cultivated by the hogs rooting for the sweet bulbs, always leaving enough small bulbs to re-seed the pasture. They are rich and sweet with a flavor very similar to the almond, and from the sample tuft sent you you can see that they bear abundantly.—W. H. J., Haywards, Cal.

These little tubers are the chufas which we and our contributors have spoken of from time to time during the last two years, and which have been grown in many different parts of the State. The best specimens we have seen have been from Fresno county. Those sent by our Haywards correspondent are thickly set on the plant, but about one third smaller than the best Fresno specimens. The chufas have been advocated as hog feed from the start. What we would like to know now is, who can give us a record of pork-making with chufas in this State, so that the advantage or otherwise of the plant may be clearly shown by final test? It has been shown well enough that the tubers will grow; now what and how much are they good for under the bristles?

Propagation of Sugar Cane.

We are reminded that our recent reply to a Fresno inquirer, concerning the propagation of the cane used in Louisiana, was wide of the mark, when we spoke of starting with seeds. We had in mind the sorghum canes which are now being most loudly noised abroad, and which seed freely. The ribbon cane, which is most famous in Louisiana, we are told does not perfect seeds, and new plantations are made from cuttings or ratoons. The sugar cane proper does not seed in the United States we believe. If our readers desire to obtain cane for experimental growth, they might use the Mexican cane, which is brought to this city by the importers of Mexican fruits. Although probably not so hardy as the ribbon cane of Louisiana, it will do for experiments. We know of plants being started from the cane as it comes to this market from Mexico.

Endorsement of the Salt Prescription for Stumps.

EDITORS PRESS:—In the PRESS of Dec. 14th, Mr. C. F. Meredith asks how to kill a live-oak stump. Please tell him to procure a two-inch auger and bore a hole a foot or more deep in the center of the stump, and fill it with common salt, keeping the hole full, and in a short time the stump will be dead to the farthest rootlet. We once killed the stump of a silver-leaved poplar in this way which was two feet in diameter and sent up sprouts from its roots for a distance of 30 feet in every direction, which worked their way through the brick walls of a cistern, making it leak, and raised the bricks in the pavement of the cellar, and of the walks around the house, and were in other ways a great nuisance.—MARY A. MOORE, Central Colony, Fresno, Cal.

MEASURING THE RIVERS.—We learn from the Stockton Independent, that the State Engineer is arranging for a most thorough and systematic gauging and measuring of the rivers of the San Joaquin and Sacramento valleys this winter, to ascertain as nearly as possible the amount of water which each stream carries at flood time. Gauge rods will be placed at several points on all the principal water channels, and a daily record kept of the stage of water shown by the rods. The cross-sections of each stream will be carefully measured at several points, and their volume, velocity of current at high and low stage, and their slope or grade will be ascertained. Some three hundred gauge rods will be put up in all. A large number of rain gauges will also be distributed at points where there are no observations regularly recorded, and a comparison of the rainfall with that of past winters, with the results of the observations as to the discharge of the rivers, will give important information as a basis upon which to form intelligent conclusions on the irrigation and reclamation problems.

THE Boston statue of Chas. Sumner has been unveiled.

Essex Swine.

For the purpose of informing our readers concerning a breed of swine but little known in this State, we have selected an engraving of an Essex sow. Although the Berkshire gives general satisfaction in this State, and the heavy Poland-China is also gaining welcome to our pastures, it would be well not to overlook the little Essex, as he possesses the distinction of historic blood, is of the black color, found best for our conditions, and is small in size, which is one of the demands of our pork purchasers. There are some local breeders of the Essex, but we have not been able to procure the facts of their experience with the breed. The sow shown in the engraving is the "Black Princess," owned by Benson, Maule & Co., of Philadelphia, who are breeders and importers of the swine. Concerning the leading traits and characteristics of the Essex, we compile notes from leading authorities:

This is a breed that will be appreciated in proportion as it becomes known. Their characteristics are almost identical with those of the Suffolks, except that the Suffolks are a pure white, while the Essex are a beautiful jet black. This is always the case, and any mixture of color, in either, is inadmissible. The style, form, size, disposition, and feeding qualities are similar in the improved breeds; and the pork of the Essex will dress as white as any, if rightly managed. Although they are considered one of the oldest established breeds, yet there have been frequent and marked improvements within the past fifty years—not the least of which has been reached during the present decade. To Lord Western, of Mark's Hall, Essex, England, is given the credit for their first great improvement, or of being the originator of the present type, though it was much inferior to that of the present day. This improvement was brought about by the introduction into his herd of the Neapolitan pig—a small, fine-boned, black breed from Italy. The late Fisher Hobbs, of the same place, followed up the improvements on the Western breed, until he has made a reputation for himself and breed that is world-wide.

They are more squarely built than the Berkshire, quiet, docile animals, that fatten almost at the sight of corn, and weigh, under ordinary treatment, when full grown, from 250 to 275 pounds. As a thorough-bred stock, to breed to common sows, we do not believe they will produce as large grade animals as the Berkshire.

The report adopted by the Convention of Swine Breeders, of characteristics of this breed, is as follows: The best specimens may be known as follows: Color black; face short and dishing; ears small, soft, and stand erect while young, but coming down somewhat as they get age; carcass long, broad, straight, and deep; ham heavy and well let down; bone fine; carcass, when fat, composed mostly of lard; hair, ordinarily rather thin. The fattening qualities being very superior. As breeders they are very prolific, and are fair nurses.

They mature early, their meat is excellent, and a year, at most, should suffice to feed them to the most profitable condition for pork; which is one of their merits, and when fat, the carcass should yield a large proportion of lard. The body should be of medium length, broad, deep and straight; with a heavy ham, well let down, and bone fine, but strong enough to support the carcass in good style. When in condition, the proportions should always be symmetrical and pleasing; medium, well-haired, with a fine and comparatively soft coat.

Essex swine possess powers of transmitting to their progeny an excess of their own good qualities, when crossed upon common and coarser swine, and the first cross upon our natives will improve their qualities, almost beyond recognition. Excepting the Suffolks, there is no breed that can compare with them for this purpose.

As breeders and nurses, they are very fair, though not equal to the Berkshires. In fact, all thorough-bred animals, as they become refined, or "high bred," lessen their fecund propensities to a greater or less extent; but ordinarily, with good management, no serious difficulty need be experienced on this point with well-bred Essex. It is essential, however, that the brood sows be matured, and not permitted to become too fat, which latter is often apt to be the case, with good feed and treatment.

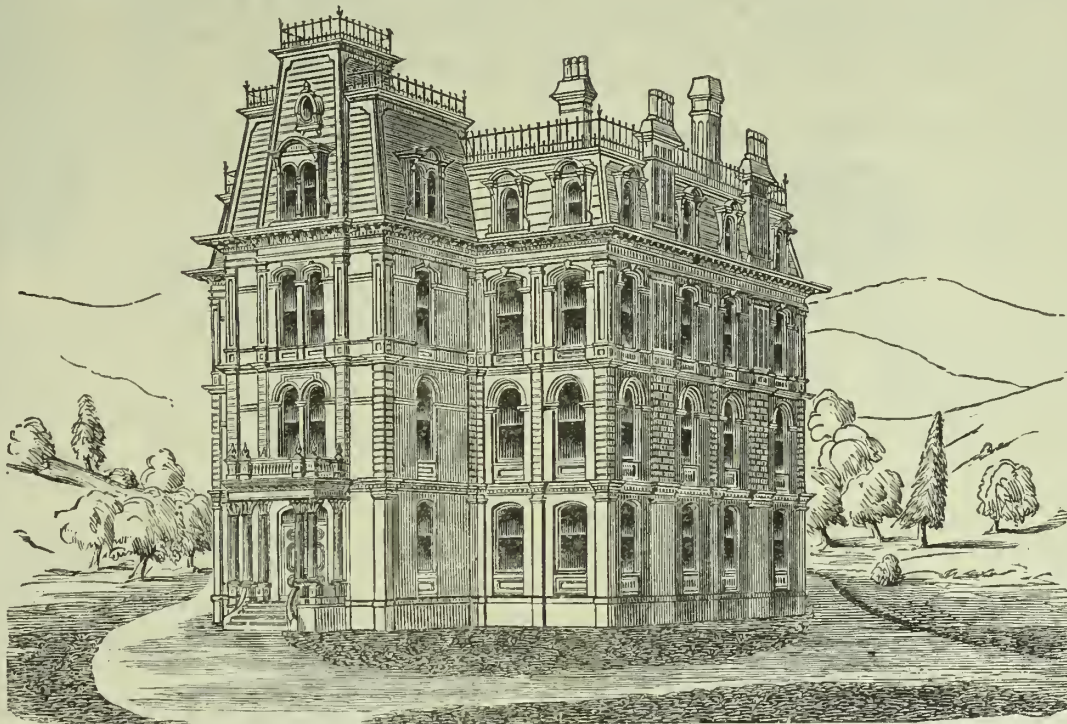
A GOVERNMENT financial clerk drew about \$10,000 the other day, for salaries. He lost the amount. It has since been returned on "no questions" conditions.

At the dinner of the New England Society on Forefathers' Day, Evans, Sherman and Blaine were among the guests.

THE heaviest snow-storm for years occurred at Montreal on the night of the 21st inst.

The Colleges of Mines and Mechanic Arts, at Berkeley.

We present in this issue a cut of the new building on the grounds of the University of California, at Berkeley. This building is to be occupied by the Colleges of Mines and Mechanic Arts. Both of these colleges are to be great factors in the advancement of the industries of our coast. The necessity of some high authority on mining subjects is very apparent to all. In the midst of a country with such mineral resources as ours possesses, is it not preposterous to think of our yielding for many years longer to



COLLEGE OF MINES, UNIVERSITY OF CALIFORNIA.

Germany as authority on matters relating to mining? Germany herself has to come all the way to the Rocky mountains to obtain information on many ores and processes. The Germans work the subjects up and our young men spend years in Europe studying what they should be able to learn at home. High reference, authorities and educators, our universities should be. And it is the aim to make the College of Mines of the University of California such an authority and educator.

The laboratories for work in chemistry are

Lectures at the College of Agriculture.

Several readers of the PRESS have inquired of late concerning the courses of lectures on practical agriculture which have been announced at the State University. We intend hereafter to give each week a brief statement of the days and hours of the coming week's lectures, also the subject to be discussed at each lecture, in order that all who desire may attend the exercises. As an answer to the general question concerning the lecture, we have a timely announcement from Prof. Hilgard, which contains full information. As will be seen by it, every effort is made by

laws of matter and mechanical principles that are of special interest to the farmer; historical sketches of the main implements, and the requisites for the best forms as now used, of the plow, harrow and other pulverizers, seeders, and mowing, reaping and threshing implements; stack-building, and the value of straw and other forage now commonly wasted; the effects of tillage on the soil in the holding of moisture and gaseous plant food. Also, a lecture on "The claims of Agriculture to rank as a Profession," delivered before the assembly of students. Besides these lectures in the regular course by Mr. Chas. H. Dwinelle, a clinical lecture on "Glanders" was given by Dr. A. De Tavel, before a large audience.

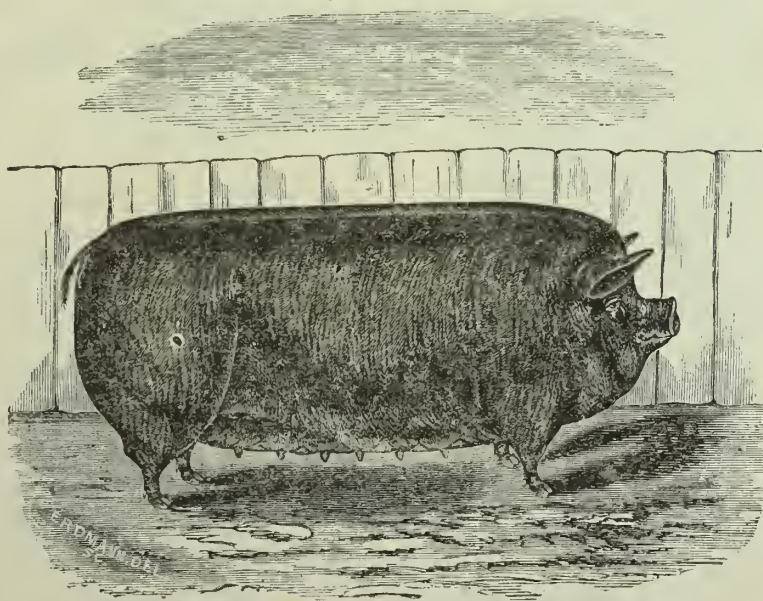
The regular lectures will be resumed after Christmas vacation, on January 9th by Mr. Dwinelle. Two more lectures will be devoted to the general subject of tillage, after which the closely related, and to California so exceptionally important, topics of irrigation and drainage will be taken up. After having considered the implements used in dealing with the soil and its products, and the means of putting the former into good physical condition, the crops themselves will successively be discussed in detail. The cereals—wheat, rye, rice, barley, oats, maize, etc.—will naturally command attention first; forage, root, textile, sugar, oil and other minor crops will then be treated of; the method being to consider, first, the history of their use by man, then the details of culture, and, so far as time will permit, the processes used in preparing the products of the soil for consumption by man.

In addition to the above, a course of lectures on dairying and stock breeding will, at the request of the Regents' Advisory committee, be given by Mr. E. J. Wickson, whose intimate acquaintance with these subjects is familiar to California dairymen. This course is intended to embrace from 20 to 25 lectures, which will be so arranged as to accommodate the largest number of those desiring to attend; either consecutively at the rate of five per week, or intercalated between those of the general course. In order that this question may be determined as soon as possible, persons desiring to attend are requested to communicate with me as soon as possible.

Other lecture courses have been in contemplation—among them especially one on viticulture and wine making. But in view of the fact that one-fourth of the present session has been lost at the outset, thus greatly crowding the course, and in the absence of a direct manifestation of interest in the special subjects, such other courses may for the present be omitted; although in the confident hope that in future years at least, a more general appreciation of the needs of our rising generation in regard to such instruction, will call for their establishment.

That there may be no misunderstanding in respect to "requirements for admission," I would here reiterate that, while for those desiring a diploma, the conditions are as stated in the register, yet any one capable of pursuing any study with profit to himself and without detriment to the rest of the class, can attend any of the courses; and if desired will receive a certificate in regard to the studies pursued. There is therefore no obstacle placed in the way of the attendance of any one desiring to acquire whatever knowledge his previous education will enable him to receive; whether in the lectures on practical agriculture, or in those that precede them in the same course, or in any other.—E. W. HILGARD, Professor of Agriculture and Botany, University of California, Berkeley, Cal., Dec. 20th.

LONG-ESTABLISHED SEEDSMEN.—Our advertising columns contain the announcement of J. P. Sweeney & Co., seedsmen, at 409 and 411 Davis street. This firm is a pioneer in the seed business of this coast, having been engaged in this line for a quarter of a century. This long career must bear testimony to business management and successful service of the people, and the experience thus gained is of great value. Messrs. Sweeney & Co. return thanks for the liberal patronage they have received, and bespeak its continuance.



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new, extensive and well furnished. They afford excellent opportunities for becoming proficient in analytical chemistry.

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The engineering instruments and the physical apparatus are also of the best kind.

There is a collection of beautiful models of furnaces, as well as one of furnace products.

The collection of ores, fossils and minerals are remarkable.

We may also add that endeavors are now being made to increase the efficiency of the mining college, by the procuring of an ore deposit collection.

will be present during the remainder of the course.

The following is Prof. Hilgard's announcement on the courses past and proposed:

EDITORS PRESS:—Please lay before your readers the following statements in respect to the courses of lectures on practical agriculture at the University: It will be remembered that owing to the small number of applicants, the opening of these courses was deferred until after the mid-term recess, the first lecture being delivered October 21st, and thereafter at the rate of three a week up to the beginning of term examinations, December 9th. During that time four students were in regular attendance, while others, as well as outsiders, attended at will. The subjects treated of so far have been the following: A brief review of those

BREEDERS' DIRECTORY.

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A. MAILLIARD, San Rafael, Marin Co., Cal., breeder of Jerseys. Calves for sale.

W. L. OVERHISER, Stockton, Cal. Importer and breeder of thoroughbred Durham Cattle, Spanish Merino Sheep and Berkshire swine. The above for sale.

PAGE BROTHERS, 323 Front street, San Francisco, (or Cotate Ranch, near Petaluma, Sonoma Co.) Breeders of Short Horns and their Grades.

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E. W. WOOLSEY, Berkeley, Alameda Co., Cal. Importer and breeder of choice thoroughbred Spanish Merino Sheep.

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M. EYRE, Jr., Napa, Cal. Thoroughbred Southdown Sheep. Rams and Ewes, 1 to 2 years old, \$20 each; Lambs, \$15 each.

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MRS. L. J. WATKINS, San Jose, Cal. Premium Fowls, White and Brown Leghorns, Plymouth Rocks, Pekin Ducks, etc.

A. O. RIX, Washington, Alameda County, California. Breeder of Thoroughbred Poultry. Send for Circular.

BURBANK & MEYERS, 43 California Market, S. F. Importers and Breeders of Thoroughbred Poultry, Ducks, etc. Eggs for hatching. Send for price list.

SWINE.

ALFRED PARKER, Bellota, San Joaquin Co., Cal. Importer, Breeder and Shipper of Pure Berkshire Swine Agent for Dana's Cattle, Hog and Sheep Labels.

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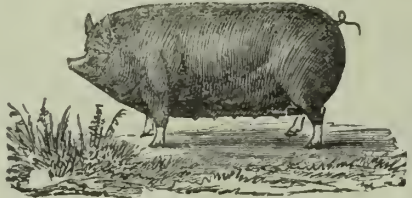
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MONTGOMERY WARD & CO.,
Original Grange Supply House,
227 & 229 Wabash Ave., Chicago, Ill.

The New Beekeepers' Text Book.

By N. H. and H. A. KING. The latest work on the Apian, embodying accounts of all the newest methods and appliances. Fully illustrated. Sent by mail, post-paid, for \$1. DEWEY & CO., 202 Sansome Street, S. F.

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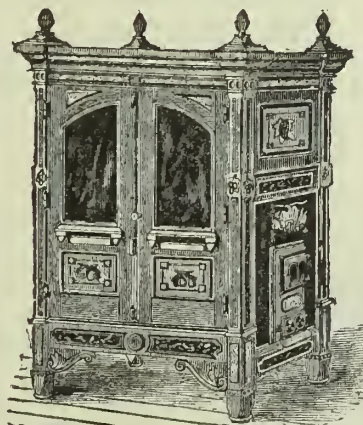
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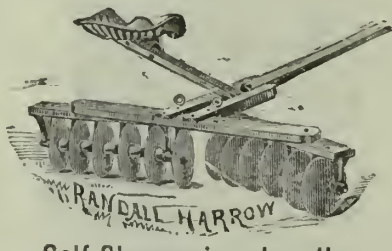
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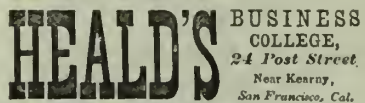
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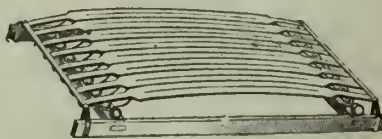
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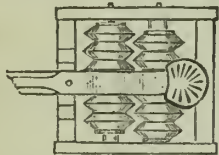
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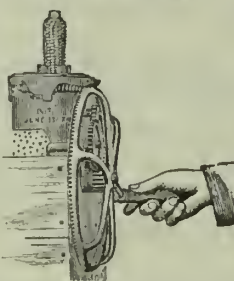
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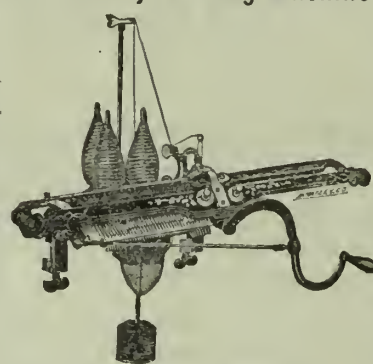
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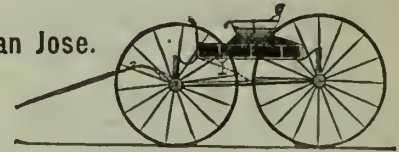
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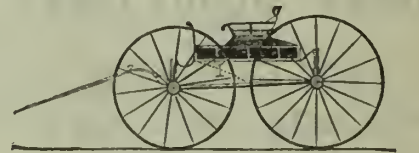
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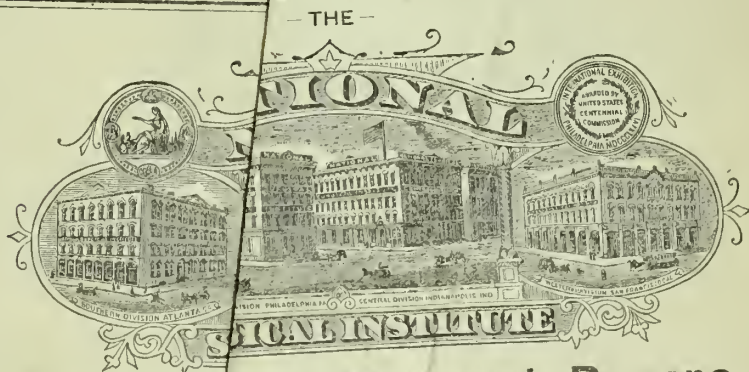
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